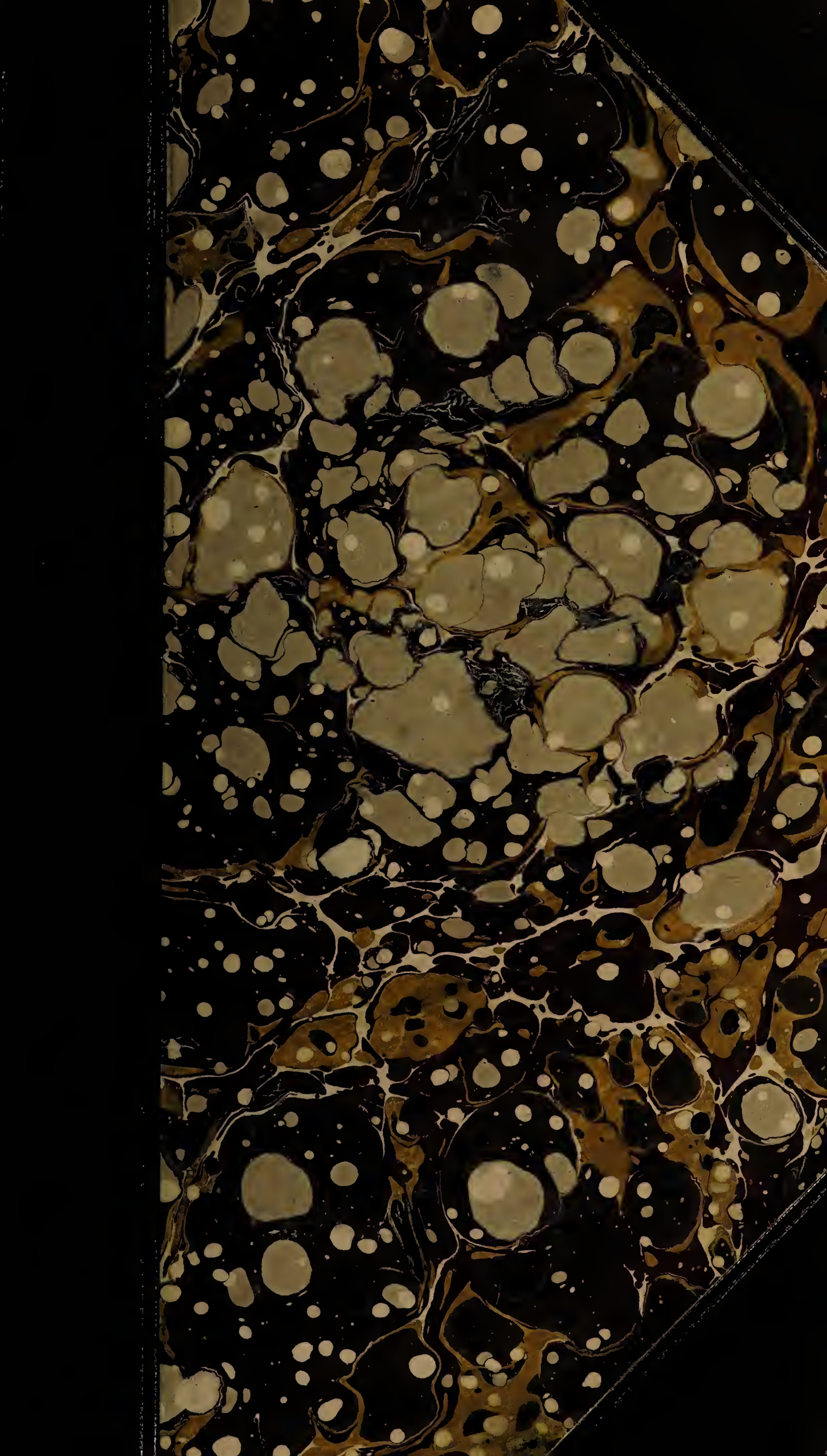

THE

QUARTERLY JOURNAL

OF

Foreign and British

MEDICINE AND SURGERY;

AND OF THE

SCIENCES CONNECTED WITH THEM;

WITH

ORIGINAL CASES AND COMMUNICATIONS.

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Books received for Review since our last Number..

Select Dissertations on several subjects of Medical Science by Sir Gilbert Blane, Bart. F.R.S.S. Lond. Edinb. and Gotting; Member of the Imperial Academy of Sciences of St. Petersburgh, and Physician to the King, now first collected, with alterations and additions; together with several new and original articles, 8vo. pp. 398. (*See Critical Characteristics.*)

Illustrations of the enquiry respecting Tuberculous Diseases by John Baron M.D, Physician to the General Infirmary at Gloucester, 8vo. plates pp. 233. (*See Crit. Charact.*)

A Manual of Practical Anatomy for the use of students engaged in Dissection, by Edward Stanley, Assistant Surgeon and Demonstrator of Anatomy, at St. Bartholomew's Hospital. Second edition with additions, 12mo. pp. 430. (*See Crit. Charact.*)

A Toxicological Chart, exhibiting at one view, the Symptoms, Treatment, and modes of detecting the various Poisons, mineral, vegetable and animal, according to the latest experiments and observations. By William Stowe, Member of the Royal College of Surgeons in London, in two large sheets broad folio. (*See Crit. Charact.*)

Pharmacopeia Imperialis sive Pharmacopœiæ Londonensis, Edinburgensis et Dublinensis Collatæ; cum notis Anglicis decompositiones Chemicas Exponentibus. 12mo. pp. 255. (*See Crit. Charact.*)

The Study of Medicine, by John Mason Good, M.D.F.R.S. Mem. Am. Phil. Soc. and FL.S. of Philadelphia, 4 vols. 8vo. (*See British Review, page* 80.)

A Practical Essay on Diseases and Injuries of the Bladder, being that to which the Royal College of Surgeons adjudged the Jacksonian prize for the year 1821. &c. &c. By Robert Bingham, Fellow of the Royal College of Surgeons, &c. &c. 8vo. pp. 467. (*See British Review, page* 131.)

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Practical Observations on Distortions of the Spine, Chest, and Limbs; together with remarks on Paralytic and other diseases connected with impaired or defective motion. By William Tilleard Ward, F.L.S. Member of the Royal College of Surgeons, &c. 8vo. 168. (*See Crit. Charact.*)

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Traité sur les Dents. Par M. le Chevalier Joseph Lemaire, chirurgien dentiste de S. M. le Roi, et de S. M. la Reine de Bavière, Membre de plusieurs Sociétés savantes Tome 1re.—Physiologie.—8vo. pp. 275. (*See Foreign Review, p.* 33.)

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TO CORRESPONDENTS.

The Editor was not aware that Dr. Marshall Hall had written the Review which he alludes to in the Quarterly Journal of Foreign Medicine, as he was not then connected with the Journal. To have saved appearance, it would have, perhaps, been better to refer to that paper.

THE

Quarterly Journal.

N° XVII. JANUARY, 1823. VOL. V.

Foreign Review.

M. FALRET ON SUICIDE AND MANIA*.

M. FALRET is the pupil of Esquirol, and in the work which we now purpose to examine, he has favoured us with opinions, probably imbibed under the auspices of that celebrated physician. His Treatise on Suicide occupies three-fourths of the volume, and he has thought proper to call it a disease, and treated it as such, in consequence of its being, perhaps, always the result of a distempered brain. Man naturally fears death, as what will deprive him of present happiness, or of that which he hopes to obtain at some future period. But, even when happiness is his only object, if physical sufferings assail him on all sides, his imagination becomes gloomy, and forgetting the ties which ought to bind him to society, he rushes voluntarily into the arms of death. May we not say then, that suicide is in most instances the result of distempered self-love? That death, therefore, which the madman inflicts upon himself in a paroxysm of senseless fury, is not considered by M. Falret as suicide; in his opinion it is not suicide, unless the slayer of himself is conscious of the action, and unless it be the result of his own positive determination. He excepts, however, from this class, those generous men, who, like a Curtius or a Codrus, have devoted themselves to death for their country. We shall now follow our author in his detail of the causes, symptoms, post-mortem appearances, and remedies in cases of suicide.

* De l'Hypocondrie et du Suicide. Considerations sur les causes, sur le siege et le traitment de ces maladies, sur les moyens d'en arreter les progrès et d'en prevenir le developpement; Par. J. P. Falret. 8vo. p. 512. Paris, 1822.

Of the PREDISPOSING CAUSES the author treats first of *hereditary disposition;* and assures us, however extraordinary it may appear, that suicidal melancholy seems to be the most readily transmitted from parent to child. M. Falret has seen repeated instances of this. A person committed suicide at Paris, and his brother was sent for from the country to attend his funeral. On seeing the body, he was much agitated, and said that both his father and his brother had died by their own hands; and that he himself had been often strongly tempted to follow their example. A similar instance is mentioned by Rush. Other species of hereditary madness are generally announced by some singularities of manner, but this is rarely the case with suicide. Individuals of the melancholic temperament, whose natural disposition is gloomy, restless, haughty, and unyielding, are strongly inclined to be discontented with their lot, and to be weary of life. Such was Chatterton, who at the early age of eighteen put an end to his existence. Those, too, of the sanguine temperament are disposed by their natural impetuosity so to magnify their miseries, that frequently in a paroxysm of impatience they commit suicide. Persons, likewise, of the nervous temperament are often so tremblingly alive, that the least contradiction irritates them; and consequently very slight causes will drive them to fury, or plunge them into profound melancholy.

As to AGE, infancy is little susceptible of this malady; yet, when actuated by envy or jealousy, orphans of eight years old have starved themselves to death; and our author knew a boy, twelve years old, who hanged himself because he was only the twelfth in his class. A similar case occurred about a year ago at Westminster school. Youth is liable to melancholy, and often feels life painful; but manhood is the age in which suicide has obtained the greatest number of its victims. Old people are least disposed to suicide, being generally as anxious to prolong life as to amass wealth; yet there have been instances to the contrary, but these were more frequent in ancient than in modern times. We seem indeed most anxious to cling to life when we possess the least of its vigour and buoyancy.

Women, from their natural delicacy and sensibility, have much less inclination to suicide than men, unless they are actuated by some strongly-exciting cause. According to the computation of MM. Falret and Esquirol, the number of suicides is three times greater amongst men than women. Out of 495 suicides in France, only 113 were females.

The EDUCATION of children may be so conducted as to produce madness; the opposite extremes of severity or indulgence leading to it almost invariably; and the author here remarks,

that, as the religious impressions made on the young mind are generally indelible, they may produce dangerous consequences, if they are of a gloomy cast. Too much study also will dispose to suicide, literary men sometimes imagining that they are deprived of understanding, that they are unfit for the common duties of life, and condemned to poverty. Those likewise who give themselves up to the reveries of imagination, or who devote their whole time to one subject, or have a fondness for theory and hypothesis, are very apt to become its prey. Those studies, too, which are adverse to the genius of the individual, as in the case of Chatterton, are not unfrequently the forerunners of suicide. If the books put into the hands of youth for their amusement or instruction, which too often contain an unfaithful picture of human life, are not carefully selected, the very exercise of the understanding may become a cause of voluntary death. Even music may be productive of much danger if a person of the nervous temperament devotes himself so keenly to it, as to neglect bodily exercise, which is at all times so necessary to life. The representations of the theatre also have not unfrequently done harm; for it is hardly possible that a young mind, if predisposed to insanity, can witness the voluntary death of Cato, Lucretia, Dido, &c. extolled and honoured, and graced with the ornaments of poetry, without being strongly and perhaps fatally affected.

Far too much scope has been ascribed to CLIMATE in the production of suicide, even Montesquieu has exaggerated its effects; and therefore M. Falret has been at some pains to prove that it is but a very slight predisposing cause. The foggy climate of England has been much blamed; but in other climates, equally gloomy—Holland for example—suicide is by no means common; and besides, it is only within the last two hundred years that it has been so frequent in England. Summer and autumn seem to be the seasons most favourable to its production. Cheyne mentions autumn and the west winds, and we are informed by Cabanis, that the autumn is prolific of melancholy, if the preceding summer has been very hot and dry, and particularly if the autumn itself is damp, cold, and changeable.

After some general remarks on *onanism* and idleness, particularly *idleness in solitude*, which have been so much insisted on by Tissot and others, as predisposing to suicide, our author turns his attention to the direct existing causes; of which none have a more determinate or often a more fatal effect upon our intellect than the PASSIONS. Of these *love* is in the first rank: and taken in all its modifications, no other has been so often the cause of suicide. Jealousy also often occasions such misery to its victim as to make him end his sufferings in death; and

ambition, whether at the summit of its wishes or disappointed of its object, frequently has the same effect. Wounded pride, forced humiliation, dishonour, or affronts real or imaginary, violated chastity and shame have been frequent causes of suicide. In a paroxysm of anger many have fallen by their own hands; and how often has the gamester thus ended his career? In speaking of fear as a cause of suicide, M. Falret tells us of a woman, who had often entreated him to kill her, because she imagined she should survive the whole world, and should not then know what to do with herself. Charles VIIth, who had driven the English out of France, starved himself to death, from the fear of being poisoned by his own son, the Dauphin. Remorse also often produces suicide. In order to illustrate the whirlwind of the passions in which they have neither aim nor object, he has given the beautiful episode of René from the pen of M. de Chateaubriand, with which we presume most of our readers are acquainted. Domestic cares also, and adversity or a reverse of fortune, have but two often been the precursors of a voluntary death. Many were the suicides occasioned by the fall of the Roman common-wealth; and if, says M. Falret, I give no instances from the history of the French Revolution, what French reader is there who cannot supply them for himself? However, it often is not the loss of fortune which causes suicide, but the wound given to self-love.

As to the INDIRECT exciting CAUSES, the author thinks that the effects of ardent spirits, mercury, and opium, in producing suicide have been greatly exaggerated; and he thinks that in every instance where they are blamed some more powerful cerebral cause might be detected. In this class of causes, physical pain has been often placed; and Pliny mentions stone in the bladder with total suppression of urine, as one of those diseases which may authorise a man to commit suicide. But even in diseases most likely to produce it, such as the *fillagra* (an Italian disease), it probably may in reality depend on a cerebral cause. In many instances, however, it would appear that leprosy, scurvy, rheumatism and cancer have induced suicide, either by their loathsomeness or the severity of their pains. Yet in our author's opinion, when a woman, at the time when menstruation ceases, makes an attempt at suicide, it is oftener occasioned by the loss of beauty or the power of pleasing, than by any physical ailment. He gives the case of a very interesting woman, who at that critical period, having a cancer in the nose, tried to hang herself; but being prevented, she confessed afterwards that she had been driven to the attempt by the fear of becoming an object of disgust to a husband whom she loved.

With respect to those GENERAL CAUSES, whose influence is not confined to any fixed period, or any particular situation, the government of states is the first that claims notice. In a despotic government there are few madmen, and consequently suicide is extremely rare; except at that awful crisis when a free state passes into despotism; or in horrid tyrannies, like that of Japan, where the slightest crime, or even an attempt at crime, is punished with death; and death becomes so familiarized to the people, that a Japanese rips up his belly with all imaginable coolness. The profession of a soldier naturally leads to a contempt of life; but it is only in the idleness of peace that he commits suicide or becomes a duelist. In active warfare he hardly ever seeks death voluntarily; not even in the greatest reverses: in the disastrous Russian campaign, suicide was hardly known in the French army. Republics, with some exceptions, are favourable to suicide. It is not, however, in the time of civil commotions that suicide is most prevalent; it is either immediately before their commencement, or when they are subsiding into a state of calmness; in the first, the apprehension of unknown calamity; in the second, the uncertainty of domestic losses, appal the mind and drive it to destruction. In a state of civilization, when almost every person has acquired a certain degree of knowledge, the mind is often called to exertions greater than it can bear; the passions are more violently agitated; and the desires are more craving in proportion to the difficulty of satisfying them; and it is then that suicide is common. In Russia it is little known; but in England, France, Italy and Germany, it is frequent.

Some RELIGIOUS SYSTEMS, as those of the Druids, Odin, and Mahomet, by inspiring the mind with a contempt of death, have made many suicides. Christianity is inimical to it, by inculcating resignation to the divine will; but corrupted Christianity, not being free from fanaticism, has been too frequently rendered the occasion of suicide. On the other hand, the man who believes that death is an eternal sleep scorns to hold up against calamity, and prefers annihilation. The sceptic, too, thus often frees himself from the agony of doubting. The maxim of the Stoics, that man should live only so long as he ought, not so long as he is able, is, we may say, the very parent of suicide. The Bramin, looking on death as the real entrance into life, and thinking a natural death dishonourable, is eager at all times to get rid of life. The Epicureans and Peripatetics ridiculed suicide as being death caused by the fear of death. M. Falret goes perhaps too far when he pretends that the grateful manner in which the gladiators died in

public, not only familiarized the Romans with death, but rendered the thought of it rather agreeable than otherwise.

The principal CAUSES which produce *Suicide in England*, according to our author, are the refined subtilties of certain religious sects, the frequency of public disturbances, the unrestrained indulgence of the social passions, the risks run in the speculations of foreign trade, the idleness of wealth; to a certain extent drunkenness, and above all that idol of the English, public opinion. The same causes in some degree influence the French; but in addition we may mention, the derangement of plans, the annihilation of hope, and a life of indolence succeeding to one of the most assiduous energy. There are other causes, but these are the most powerful. Dr. Burrows has attempted to prove that suicide is more frequent in France than in England; but his own arguments lead to the conclusion that England is the native land of self-murder. So far, however, from being reproached for this, that country is only the more an object of pity.

Ennui, or spleen, is not the malady of the labourer or the artisan, but of the refined and luxurious; although it is found even in the artist, if he applies himself to an art which is contrary to his choice or the bent of his genius. If the objects round us are disagreeable, or even though every way delightful, if they fail to interest our senses, ennui, spleen, or weariness of life, is intermingled with all our actions, and the consequence too often is suicide. The lover, though surrounded by the most delightful landscape, though in the midst of society at once agreeable and refined, if at the same time deprived of the tender object of his love, pines away and languishes, and is the prey of spleen. So it is also with the ambitious man, when stopt short in his career. In the spring of life, too, the young man and the young female often feel its fatal influence; and when life is spent without variety, or in one dull round of insipid pleasure, spleen becomes very powerful. If the mind, that in a foreign country still hopes to revisit the scenes of its earliest pastimes, and of all its fond remembrances, be deprived of that hope, it languishes and withers like a flower that has been transplanted into a strange soil. Numerous indeed are the victims of spleen, but none in general are more so than the rich and powerful, the object of the poor man's envy, who little knows what a wide abyss there often is between possession and enjoyment.

The *delirium* of *suicide*, like melancholy, of which it is often but the last step, when generally considered, appears in TWO principal but opposite FORMS: the one is characterized by the most profound melancholy, by fearful apprehension of impending mischief, and by a particular fondness for solitude; the other

by much corporeal and mental excitement. The last generally follows the destruction of some favourite passion; and the suicide is so instantaneous, that the physician is called in only to witness its consequences. At other times the progress of the delirium is slower; and an attentive spectator may mark its features and arrest its progress. The expression of the countenance is then extremely changeable, and seems even as it were in some degree convulsed. The face is for the most part flushed, the white of the eye is bloodshot, and there is a strong pulsation in the temporal and carotid arteries. The head-ache, which almost always afflicts such patients is more or less severe, and its seat varies; but it is generally there that the most pain is felt. The patient almost never sleeps; and this symptom sometimes precedes all others. The feelings are sometimes almost entirely blunted, at other times they are preternaturally acute. Such patients at one time complain of an icy coldness all over them, and at another they think themselves on fire. Some of them have declared that they were impelled to suicide by inexpressible anguish, and others by a feeling of unutterable happiness. There are some slight ailments in the breast and bowels; the action of the stomach is in some respect impeded; there is more heat than usual at the hypochondria, or sides of the epigastric region, which at times are painful and hard to the touch; but with all this, those physicians are certainly wrong who look upon the liver and spleen as the chief source of cerebral disorder.

The PROGNOSIS is more favourable in that kind of suicidal delirium, attended with excitement, than in the melancholic, and if the inclination to suicide does not degenerate into madness, it will generally cease with the cause that produced it; but, after it has ceased, sometimes very slight causes will renew it. It is thought that the suicide goes to death with great coolness; so it may seem to a superficial observer; but with care it is by no means difficult to discover his internal agitation. Is suicide an act of courage? Both brave men and cowards have committed it; therefore, it has been the effect of delirium in both. Suicide, characterized by profound grief, is oftener the last step of melancholy than a primitive affection. The persons affected with it are silent, gloomy, cowardly, suspicious, and meddle with the objects round them only to torment themselves. The attempts made to amuse them irritate their minds; they think we are making game of them, that they are despised, and they see a mystery in every little circumstance that occurs. In this way 'trifles light as air,' give rise to the most unreasonable suspicions. The future appears to them under the most frightful aspects; they have a gloomy and repulsive look; despair is depicted in

every feature; their countenance is motionless, tawny, and cadaverous; their eyes are hollow, inanimate, and either of their natural colour or very much bloodshot. They have head-aches more or less severe, for the most part confined to the brow, and particularly at the root of the nose. There is a strong pulsation felt in the inside of the head; their days and nights are passed without sleep; or if they sleep, they are troubled with dreams and fantastical apparitions. The breathing is interrupted by frequent yawning, the arms seem to be tossed convulsively, the skin is warm, in some parts as hot as fire, and in others as cold as ice. There is a distaste for food, or a want of appetite, or they obstinately refuse every kind of nourishment. The bowels are in a very irregular state, or they are in general constipated. In this painful state, they reflect on some plan of suicide. They not unfrequently keep a journal, in which are narrated their various feelings, and the kinds of death which they have alternately chosen and rejected, with their reasons for doing so, which are often abundantly ridiculous. They make their will, and at the same time do all they can to conceal their despair and their delirium. Frequently they accuse themselves of madness, and lament the misfortunes which overpower them; whilst others argue with great strength of reasoning in favour of their prejudices. Morality and religion seem to startle others in the midst of their career, and a severe struggle ensues, which is generally terminated in favour of suicide. I knew a woman, says M. Falret, who was convinced that her ideas of suicide were contrary to her principles of religion; yet she destroyed herself, in the persuasion that every general rule has its exceptions, and that hers was exactly a case in point. Some murder themselves to get rid of the horrid thoughts of suicide; whilst others brood over them, like J. J. Rousseau, for months and for years, and at length perpetrate the very action which they dread. The kind of death which they chuse seems to be indifferent to them, but generally the one that is quickest and least painful is preferred; but some are obstinately bent on one kind of death, and whatever opportunities they may have will take no other. Some men, for example, have a natural horror at blood, and however determined on self-destruction, would on no account use a cutting instrument for that purpose. When once determined, they are cunning enough to deceive the strictest superintendance, and chuse their time with such infinite address, that we cannot be too much on our guard against it. Some persons, altogether ignorant of the nature of mental alienation, and not knowing that the melancholy man is at all times capable of reasoning on the subject of his own delirium, have thought very erroneously that this

address was a proof of a sound mind. Their contrivances for this purpose are sometimes wonderful. In general they seek a retired spot to execute their purpose, though at times it has been done in the most public manner; thus a disappointed lover has killed himself in front of his mistress's house, on the very day of his marriage. When the melancholy man has fairly determined on suicide, nearly the same symptoms are observable, as in suicide attended with high excitement, which, in our author's opinion, proves that in both cases there is a similar alteration in the brain, and that, between the two kinds of delirium, there are merely shades of difference. It is rare that this kind of melancholy is constant: it often remits, and at times it even assumes the intermittent type. The paroxysm is almost always brought on by relaxation, or by some moral cause; and, in women, attempts of this nature are more frequent some days before and during the flow of the menses than at other times. But certain symptoms may be observed for some days previous to the attack, and these should be carefully noticed, that proper measures may be taken to prevent its coming on. For instance, the usual symptoms of the malady are all aggravated; they are quarrelsome, discontented, and fond of being alone. They complain of headache, they get no sleep, and they refuse food. They are lazy and regardless of every thing round them, and there is something sinister and characteristic in their look; which is immediately known by an experienced eye to be a precursor of the attack.

Instances of MUTUAL SUICIDE, when two individuals, generally lovers, fall by each others hand, are not uncommon. It was known in ancient as well as modern times, and unhappily it is now-a-days but too frequent, probably in consequence of certain novel writers having patronized, or at least painted it, in too brilliant colours.

Those who have committed suicide have, generally, for a longer or shorter time, exhibited undoubted marks of melancholy; and the suicide is at last commonly the effect of some storm of passion. Here, however, as in other kinds of melancholy, the patient associates certain erroneous ideas in his mind, and at length, believing them to be true, draws very rational conclusions from them. Yet his fits of irresolution and determination, his struggles betwixt cowardice and courage, betwixt his contempt of life and his natural fear of death before perpetrating his purpose, are all but too strong evidence of a diseased brain. But with all this, says the author, I do not call that death suicide, which is the result of certain delirious ideas in monomaniacs, and altogether independent of the will. For instance; a person of studious habits imagines he has received a commission from the

Almighty to convert the human race ; but after using threats and entreaties to effect his purpose, and finding them of no avail, he determines to make a striking impression on a sinful world, and throws himself from a high bridge into a river and is drowned. This is not suicide ; it is the action of a madman, who thinks himself invulnerable, and who wishes to give a striking proof of his mission. The author gives other instances of the same kind. But monomaniacs often destroy themselves with a complete consciousness of the action ; particularly those affected with love, madness, or with the feelings dependant on religious austerities; for in no other kinds of monomania are patients so much disposed to injure themselves or others. But in other cases, as in true suicidal melancholy, the patients fall a sacrifice to the impatience with which they bear intellectual or corporeal pain ; for at such a time they look on death with pleasure, as the termination of their sufferings. It is said that Springer, the inquisitor, sometimes met with women so possessed with demons that they were sick of life, and he had them condemned to death merely to oblige them, and burnt them alive out of charity. Indeed nothing can equal the torments which these unfortunate people, the fancied demoniacs feel ; the very sight of them is painful.

The inclination to suicide is not complicated with melancholy only ; it occurs also in combination with mania, hypochondriasis, and the dementia of Pinel. The maniac is so often in a state of mischievous activity that he may voluntarily turn his fury against himself ; and his inclination to suicide may shew itself at the commencement of his malady, during its continuance, or at the moment of convalescence. It is for the most part at the approach of periodical mania that the patient destroys himself. He may then feel, perhaps, the destruction of his reason inevitable, and may prefer a natural to an intellectual death. During convalescence, the remembrance of the state in which he has been, and the fear of relapsing again into it, may stimulate him to commit suicide. The motives that may determine to it, during the continuance of madness, are infinitely varied ; but the inclination generally depends upon certain hallucinations of sight and hearing. One idea, or a train of ideas, may become the cause of suicide, and the madman pursues his design with all the perseverance of melancholy, till a stronger impression or a preponderant idea turns him from it ; and this ought to be carefully attended to by those who have the care of madmen. In the maniac, the idea of suicide and murder are often connected. Suicide has also been committed in the delirium of fever.

With regard to the hypochondriac, there is less risk of his committing suicide ; he is fonder of talking about the thing than

really doing it; but at length, the idea of his being incurable becomes more painful than that of death, and he falls a victim to his feelings. 'Who will deliver me from my distress?' says the philosopher Antisthenes. '*That* will,' says Diogenes, presenting him with a dagger. 'But I do not want,' says Antisthenes, 'to get rid of life, I wish only to be freed from pain.' An hypochondriac once came voluntarily to the resolution of throwing himself headlong from a window, because in his attempts to be a believer in religion he never could get beyond doubting. We have never observed the inclination to suicide in the dementia of Pinel, unless it has been the consequence of several fits of melancholy, and when life has been painful to the patient.

What ideas can impel those unhappy persons, whose only object is to get rid of life, to transfer the effects of their despair from themselves to entire strangers, or even to those for whom they have the most affection? The knowledge of this would be a matter of great importance to the practitioner, and would guide him in forming his opinions as to the duration of the patient's confinement, or as to the risk of allowing his relations or friends to visit him. In many cases, the murder is caused by an erroneous judgment as to the nature of crimes. Some melancholy persons are afraid of enraging the deity by a voluntary death, and therefore render themselves amenable to the laws, by murdering some other person, thinking they will have time to repent, and that God will pardon them; others destroy the individuals whom they love, to prevent them from sharing those misfortunes, by which they fancy themselves overwhelmed; some under the influence of love and jealousy commit suicide, or give themselves up to justice, after having imbrued their hands in the blood of a beloved object. In support of these positions, M. Falret has narrated some curious cases, but to enumerate them would far exceed our limits; it is wonderful, he observes, what strange shapes delirium may assume, in the same individual.

Epidemic suicide actually appears to have happened in different places, especially in times of great public distress; and when the constitution of the air has been very hot and moist. In 1806, sixty suicides occurred at Rouen, during the heats of June and July; and at Copenhagen, in the same year, more than 300. In 1793, about 1,300 occurred in Versailles alone.

The PROGNOSIS in this disease is always unfavourable; but it is less so, if the disease is not complicated, if it is recent, if it depend on slight moral causes, and if it is no way connected with an improper education. In general, the tendency to suicide may be obviated without difficulty, if it is connected with the commencement of madness or melancholy; and particularly, if

the patients at such times have a wish to starve themselves; a derivation to the stomach and intestines being then often procured, if an emetic or suitable purgative be administered; when the attempt at suicide has often been made without success, the patient is sometimes cured radically, or the inclination to it subsides for a long time, or it has terminated after a sudden burst of passion. Suicidal delirium may also end favourably by means of certain evacuations or critical diseases; and there are instances of persons who had lost all remembrance of suicide, when restored to life after being suffocated; it may likewise terminate in mania, or in natural death happening either suddenly, or after chronic diseases more or less tedious. In the spleen, and in nostalgia, the cerebral disorder ends sometimes in a general consumption.

The appearances on DISSECTION are nearly the same as in other maniacal affections; namely, diseased appearances in almost every organ, and even sometimes in a single organ; yet the liver is seldom injured, and those physicians who think otherwise, may do mischief by following a wrong plan of cure; nor are gall-stones found oftener in the gall-bladder in this, than in other species of melancholy. Heister, in one patient, found the pancreas hard and schirrous, and in another it was enlarged in size and filled with black blood; he noticed also some alteration in the bile, and in the gall bladder, and its excretory duct. M. Esquirol was the first who observed the displacement of the transverse colon, which becomes oblique and even perpendicular, and it has also been noticed several times by others. Osiander makes mention of chronic inflammation of the intestines. In a hysterical girl who had hanged herself, one of the ovaria seemed to have been burst by a fluid contained in it. Diseased appearances of the heart are also often met with. In general, our author found that sufficient attention has not been paid to the diseased appearances of the coverings of the brain in mental diseases; yet in many instances these show traces of more or less severe irritation, and he thinks that these are more frequent, or at least more easily observed in the pia mater, than in either the dura mater or the arachnoid coat. Cabanis has found more phosphoric matter in the brain of madmen and suicides, than in that of other men. In a melancholic patient who died of hunger, M. Esquirol found the brain hard and of a violet colour, as if it had been injected with violet-coloured wax. Softness of the corpus callosum is not generally established; the opposite state having been oftener observed by M. Falret and Lobstein. In Hufeland's Journal (1812,) we have an account of a suicide in whose brain a cyst was found above the right

ventricle, in which was a bone an inch long and three lines thick. M. Fretau has attributed suicide, in two cases which he observed, to a thick and very glutinous blood stagnating in the head. But in many patients, accurate observers, such as Esquirol and Joseph Frank, could find no change cognizable by the senses; and this is almost always the case in individuals who kill themselves, before the malady has taken deep root.

In entering upon the consideration of the SEAT of suicidal melancholy, he does not agree with those physicians who assign different seats to madness and melancholy; nor does he think that the innumerable divisions which have been made of those maladies are of any real importance in practice. It may be affirmed too, that the varieties of delirium do not depend on different modifications of the brain, but ought to be attributed to the difference of manners and customs, and to the prevailing ideas of some particular age or country, or to the influence of education, habits, creeds, &c. Awenbrugger, Leroy, Noest, Fodéré, and Esquirol, all assign the abdomen, and more particularly the liver and spleen, as the seat of suicidal melancholy. M. Falret, on the contrary, thinks that suicide may be as often said to depend on cutaneous as on abdominal disease; that it can have no other seat than the organs of the intellectual and moral faculties; that it very rarely happens that disorders of other organs are its remote cause; and that consequently the encephalon or brain, *almost always primitively affected in this disease*, is the source of every kind of mental aberration. We certainly cannot agree to this, nor any other of those exclusive causes assigned for diseases. Why may not all these causes act in different cases and under different circumstances?

If the hereditary predisposition to suicide depends on the powerful agency of the feelings peculiarly modified, it must be more natural, he thinks, to seek for the seat of such modified feelings in the organ of sensation, and of the intellectual and moral faculties than in the instruments of the nutritive functions, the liver, spleen, intestines, &c. Every day's observation, indeed, may prove the existence of such peculiarity of feeling; for do we not see that what affects one person in the strongest manner, makes little or no impression on others, although, apparently, it be a matter of equal indifference to every one of them? The other predispositions most worthy of notice are the nervous and melancholic temperaments, education, and the age of manhood. What are the principal characteristics of these temperaments? Sensibility, exalted to the highest pitch, and a fondness for the most refined sensual emotions, and, in certain cases, a particular tendency of the mind to seek after tranquillity

and solitude, and to see every object in the darkest light? Do not these phenomena depend essentially on the brain? Indeed, in all persons of the nervous melancholic temperament, the brain is in almost constant exercise; and the life of an animal which has no brain is almost that of a vegetable: of the predisposition arising from education we need not speak. But how does the age of manhood predispose to suicide? Man, it may be answered, at that time begins to feel anxiety and care, his most dangerous passions are coming into action, and his mind, or rather his brain, is exposed to the most toilsome efforts.

Causes purely physical have, therefore, but little effect in producing suicide, and even when it has appeared to be caused by physical pain, we may almost always, he thinks, trace it primitively to some moral cause; and when it is considered, that wherever suicide has been very generally prevalent, it seems always to have been connected with causes affecting the mind or brain, it will appear, he thinks, how inadequate disorders in the abdomen are to produce intellectual derangement. M. Falret then gives ten cases, brought forward by MM. Leroy and Fodéré, in proof of the abdomen being the seat of suicidal melancholy: but in nine of them the propensity to suicide can be clearly traced to intellectual or moral causes; and in the tenth the cause is not mentioned; so that our author's cases and those of his antagonists resemble one another most exactly as to causes. But if the first symptoms taken notice of are cerebral, if they are never absent, and are the only ones any way severe, there can be no doubt as to the seat of the disease; and therefore, the primitive disorder of the brain should be regarded as the cause of those phenomena exhibited by organs more or less remote from it. M. Falret's analysis of those cases is undoubtedly favourable to his own opinion; and the abstract of twenty cases, which he subjoins, seems strongly to confirm it. In all of them the suicidal melancholy was subsequent to direct cerebral causes; in eleven the seat of the disorder was exclusively in the brain; and in the other nine the symptoms of disorder in other organs were always evidently subsequent to the affection of the brain, sometimes by several years, and even independently of the propensity to suicide. His opinion, he thinks, still further confirmed by this circumstance, that the secondary phenomena, in wounds of the head, in inflammation of the arachnoid covering of the brain, and in apoplexy and hydrocephalus, have a striking analogy to those observable in the disease which leads to suicide.

The brain, from the earliest times, was thought to be the seat of intellect, and many things confirm this idea; particularly the delirium, and altered state of the functions of the senses, which

accompany different organic modifications of the brain. Others think that the soul is the primitive seat of madness. Even physicians, who allow that the brain is the organ of thought, have not set a just value on the symptoms of mental alienation, and have not drawn legitimate consequences from the appearances on dissection; thinking that the remarkable changes which take place are rather the effect than the cause of madness, and that the brain is only secondarily affected. Dissections of morbid bodies are undoubtedly useful, but they would be much more so, could we, from appearances, tell the symptoms that had been present in the living body. This may be done in a few cases, but in most of them it is extremely difficult, and must be much more so in an organ whose texture and mode of action are but little known; and this remark is peculiarly applicable to the brain and nervous system. The parts may be in a morbid state, although that state is not apparent to our senses. Physicians therefore should not draw such strong conclusions, as they commonly do, from the non-appearance of morbid changes.

The changes observed in the thorax and abdomen of MANIACS are the same as are often seen in maladies very different from madness; and why should it not be so? Madmen are as much exposed to thoracic and abdominal complaints as other men. But why not allow that a diseased brain may occasion disorder in the thoracic and abdominal viscera, as readily as phthisis produces morbid alterations in the intestines? If, on the one hand, we attribute many of the morbid changes observed in other viscera than the brain to a primitive affection, on the other hand we may assign a number of them to situation, seasons, mode of living, treatment, &c. In general, when the progress of madness has been very rapid, we observe no change in the brain, nor indeed in any other organ, nor in madmen who commit suicide, before the malady has taken deep root.

When we can tell, says M. Falret, what constitutes the difference betwixt the brain of a peasant, whose ideas extend little further than his waggon, his flock or his hut, and that of a Pascal, a Bacon, a Newton, or a Descartes, where so many fine images were arranged with such consummate art, we may arrive perhaps at the proximate cause of madness. It cannot be exactly known from an inspection of the brain of madmen, but we may presume that it has some connection with what is observed there:— 1st, because organic læsions are much more frequent in their brains, than in that of other patients; 2d, because in the numerous cases where no læsion can be detected in any organ sufficient to account for the maniacal symptoms, we have a right to suppose the cause to be in that organ whose texture and mode of

action are least known; 3d, because our opinion is confirmed by analogy; for pathologists admit diseases of the nerves, where functions are disordered, but where there is no visible organic change; and of this we have a striking example in amaurosis; 4th, because the diseases which madmen die of are in general intimately connected with the nervous system, one half of them at least dying of palsy. And besides, symptoms often give us a far more exact knowledge of the nature of certain maladies than can be obtained by the most rigorous inspection of the injured part; of this syphilis and scrofula are examples. The plague, the itch, scarlatina, and small-pox depend on specific causes essentially different, yet they all leave the same impression on the dead body, namely, traces of inflammation; and it is only by their symptoms that we distinguish them.

MM. Noest, Leroy, and Awenbrugger, who fix the seat of this disorder in the abdomen, of course give all their attention to the state of the abdominal organs. Leroy endeavours by the use of deobstruents to make the fluids circulate freely in the liver and spleen, in order to remove atony from the vessels and excite them to healthy action. The principal means used by Awenbrugger in the cure of suicide was cold water, which has again been introduced into practice for some years past by Leroy, whose plan of treatment consists,—1st, in putting the patient in confinement, when it is dangerous to leave him at liberty; 2d, in making him drink a pint of cold water every hour, and if he still continue thoughtful and silent, in wetting his foreheads, temples, and eyes with cold water, till he become livelier and more communicative; and 3d, in putting a blister on that side *(hypochondre)* where there is most heat. And as the feet are apt to become cold during the application of the cold water, they are wrapt in warm flannel. Awenbrugger's method in some cases has been successful; but only, M. Falret apprehends, when the patient has already been in a fair way of recovery. The obstinacy of patients in this disorder is so great, that it would be impossible, during its continuance, to make them drink such a quantity of water; and when they do consent to take it, we may rest assured, that any other means would cure them. The above plan acts merely by derivation and revulsion. We have seen a melancholic patient, who had a tendency to commit homicide and suicide, drink readily a pint of water every hour for three weeks without the smallest benefit. In another case similarly treated for three months, with the addition of a seton in the right hypochondria, no advantage was gained from the treatment; there was merely some disorder in the stomach and bowels for the first eight days. Any benefit that was ob-

tained in M. Leroy's cases, seems to have been from the confinement, and the very frequent application to the head of cloths dipt in cold water, in which sal-ammoniac had been dissolved. Besides in cases where Awenbrugger's plan had been adopted, apparently with success, blood-letting and purging had been previously employed. But M. Leroy himself says it is absolutely necessary afterwards to use moral remedies.

In all diseases we attempt a CURE in two ways; we either act upon remote parts which are connected with the real seat of the disease by sympathy, and this is the mode by revulsion; or we act directly on the part itself where the disease is seated; and in mental alienation this forms the moral and intellectual treatment of authors.

As in every species of mental alienation EXERCISE is serviceable, so is it in this; manual labour in the fields for the poorer sort of patients; billiards, tennis, &c., and journeys in the country, and over rough roads, on foot, on horseback, or in a corriage, for the rich and luxurious. These all withdraw the attention of the patient from the malady, and render more regular the functions of the abdominal viscera which are sympathetically affected. But exercise is not sufficient, if we do not use the most appropriate internal medicines, and employ judidiciously the usual moral remedies. Travelling is a powerful means of recovery; and the more inconveniences the patient meets with, so much the better, as it thus substitutes real discomfort in the room of imaginary distresses, and agreeably withdraws the mind from self, to the examination of the varied beauties of external nature. But a sea voyage is less desirable from its sameness, and on account of its almost constant attendant sea-sickness, which often actually produces a regardlessness of life.

The REMEDIES which we make use of, should be somewhat varied, according as the patient is in a state of strong excitement (*exaltation*), or in one of extreme depression (*concentration*); however, if the disease is but beginning, probably the same treatment will suit both. Both topical and general blood-letting should be employed to such an extent as may be warranted by the symptoms. The warm-bath, continued for several hours at once, is often of great service; and at the same time it is useful to wrap linen-cloths, wet with cold water, round the head, or to have a wet sponge applied to it, during the continuance of the bath. These remedies should be assisted by the internal use of cooling beverages, gentle sedatives, and sometimes even of mild purgatives. In the second period of the disease, it is proper to employ strong or even drastic purgations, not only as derivatives and evacuants, but so as to occasion

serious uneasiness, and make the patient anxious about his health; for to gain this last point is one step towards recovery. As we are convinced that no particular purgative is a specific in this disease, we should always employ that which is most efficacious and least dangerous. Emetics are not only useful in the course of the disease, but they are exceedingly useful in preventing a relapse. If an emetic in an ordinary dose does not produce vomiting, instead of augmenting the dose, it may be better, in the opinion of M. Amard of Lyons, to give a small dose of opium some hours before the emetic. Blisters, setons, or cupping may be of use as derivatives, and they may be applied, in preference, to the sides, on account of the intimate connexion, which these parts have with the head—the organ primitively affected. But, when we wish only to occupy the attention of the patient, it is better to put them on the legs, that, in combination with exercise, they may produce a pretty smart pain. M. Falret thinks that these external stimulants, in general, have a good effect. Antispasmodics and narcotics are seldom useful in diseases of the mind; but in the hands of a practitioner, who knows how to use them, they may be of great service; during excitement, and in the time of a paroxysm, he has always found opium hurtful; and he thinks it should hardly ever be used till the irritation of the head is gone, and the patient in a state of convalescence; at this time tonics are sometimes indicated; and when the disease is intermittent, cinchona has been employed with a happy effect: such are the indirect means of recovery. But what treatment can we employ in the spleen, or how restore enjoyment to the man who has quite exhausted it? Here the advice which Fenelon gives to Dionysius the tyrant, by the mouth of Diogenes, will naturally apply. "To restore his appetite he must be made to feel hunger; and to make his splendid palace tolerable to him, he must be put into my tub, which is at present empty."

It seems to be indispensibly necessary, that the patient should be separated from his friends and relations, but he ought not to be kept in a private apartment, but rather in a common ward; the ward ought to be on the ground floor. The physician should appear to him in a prepossessing light, and should seem to take a tender and an eager interest in his welfare. To gain a patient's confidence his foibles should almost never be attacked rudely: if reason comes to him with a frowning look, he is proof against it; and he will not regard that man with affection, who has no pity for his failings. We must try to fix the attention of our patients upon those objects that are most dear to them, and at first present nothing to them but images of joy, and new means of happiness. Let every one near them

behave with affectionate regard and polite attention ; let every body endeavour to tend the person ; to sooth the mind ; and it is in this way that we gain the confidence of the malancholic, and give them courage to endure life. The most favourable moment for making an impression on them is when they enter into the asylum. There they receive with pleasure the consolation that is offered to them. In general, it is better not to reason much with them at first ; long conversations are more likely to bewilder than to cure them. It is better to say something that may rouse them to reflection, and then leave them abruptly. The physician must adapt his means to the genius of individuals, and must study them for that purpose. But at all times he may tell them agreeable news ; he may satisfy the hopes he has excited. He may also sometimes flatter them, for by flattery he will give them that impulse which is necessary for their recovery, and which they imagine to be the consequence of their own exertions. He may also exaggerate the happiness that awaits them on leaving the Asylum. Pleasing illusions are the balm of moral pain ; and should we not be lavish of them, when it is the only means of making life supportable ? But let us show astonishment at their extravagances, that, if possible, they may be ashamed of them. Passions opposite to that which has excited the disorder may be reckoned among the means of cure ; and a sudden and unexpected emotion has sometimes been productive of the happiest effects.

If there are deranged persons to whom you are unable to give a favourable impulse, make them live in company with others, and point out models for their imitation ; one melancholic patient, perhaps, will not take food in his own apartment ; but, led away by the sympathy of example, he will take it almost of his own accord, if he see other patients eating, and if some one invites him to follow their example. It is often of consequence, although at the same time they should be strictly watched, to seem to trust them, especially if they have pledged their honour not to attempt suicide. Sometimes we find it very difficult to give a favourable answer to their demands, there is so much danger of a bad use being made of any liberty that may be allowed to them. No one, therefore, but a practitioner who has been much accustomed to attend madmen can decide in a case of this nature. But we cannot be too careful, and ought at all times to be on our guard with such patients, notwithstanding their promises and tranquillity ; for these unfortunate people try to lull us into a state of security, that they may find a favourable moment to terminate their existence. When a melancholic patient refuses food, it would he wrong to suspect him of in-

tending suicide, as we might thus run the risk of putting the idea of it in his head. They obstinately refuse food, particularly at the commencement of the disease; and, as it often depends upon a disordered stomach, it is then useless to oppose the patient; and, even if it happens at a more advanced period, it is only for a short time; in both cases it is of little moment, seldom lasting more than two or three days. An emetic is sometimes useful; some will not eat from a principle of religion and honour, or from the fear of being poisoned, &c. But if this refusal continues beyond a reasonable time, we must overcome it by force, but not till we have employed every kind of friendly remonstrance, and been convinced of its inutility. We should recollect that sometimes little trifles will suddenly and unexpectedly excite the desire of food.

The melancholic seem, in general, to bear the sight of mournful objects better than joyful ones, and upon the whole to derive more advantage from them: many being unhappy themselves, because they have never thought of the misery of others. The exercise of the intellectual faculties may be attended with the best effects; and a perusal of the masterpieces of the human mind may be a source of never-failing delight. The subject of moral remedies is inexhaustible; and moral medicine is bounded only by the genius of him who exercises it. One must have lived with deranged persons to have an adequate idea of the care and attention which they require; for if their temperament is not perfectly known to us, we can hardly utter a single word without the hazard of injuring them; and therefore all our conversation must be in harmony with the age, sex, education, character, and habits of the patient to whom it is addressed. Mildness ought to form a principal part of all the regulations in a lunatic asylum; but it is necessary to punish sometimes; yet we forbid blows and chains, being convinced that they deprive man of every feeling of his own dignity, that they inspire him with a thirst for vengeance, and render him incurable. We do not think it necessary to follow M. Falret in his enumeration of the various modes of punishment or repression, as the subject is not new: we shall only say with him that they should be used as seldom as possible, and that the rotatory machine of Darwin should never be used without the presence of a physician. Punishment should always be proportioned to the character and situation of the patient; and the physician or attendant ought never to allow his temper to be for a moment ruffled, when he is obliged to rebuke or punish a patient, who should be made to comprehend, if possible, that the punishment is directed against his fault and not his person.

When the patient has recovered, he ought to be kept away from all those objects that occasioned his delirium, or are capable of exciting it; thus the sight of a river, of fire-arms, or of a poison, have recalled the idea of suicide, even years after it had ceased. Our attentions to the patient should be redoubled at certain seasons of the year, at the periods of the menstrual discharge, and during and after the time of delivery.

After an able examination of the LAWS AGAINST SUICIDE, our author gives it as his opinion that they are altogether useless, if they have not been the means of rendering it less frequent. It is not to be supposed that he who has become regardless of the tender ties of domestic love will pass a thought on the ignominy that may await his dead body or his memory. It is therefore to medicine, in unison with philosophy that we must look for the prevention of suicide. Speaking of preservative means in particular circumstances, the author gives the following anecdote of Bonaparte:—In one of the regiments of the line, two suicides having been committed in one week, the first Consul stopped the contagion by issuing the following general order: "A soldier should be able to subdue his passions, as the man who suffers mental pain without shrinking, shows as much real courage as he who stands firm under the fire of a battery; for, to become the prey of melancholy, or to commit suicide to escape from it, is like flying from the field of battle, before the contest is decided."

To PREVENT SUICIDE, a man should avoid marrying into a family, in which suicide has been committed; and a mother in such circumstances should not hesitate for a moment to employ a nurse for her children; and the more particularly, as madness has been found to descend far oftener from the wife than from her husband. When children are so disposed, habitual exercise should be long employed in their education; they should never be for a moment idle; and they should be accustomed from earliest infancy to subdue their passions. If we allow them to lead an effeminate life, and gratify them in every thing, we shall infallibly increase the tendency to suicide. In short, education should be founded on pure morality, and on mild and enlightened religious principles. The author finishes the third part of his work, with two beautiful extracts from B. de St. Pierre, and Jean Jacques Rosseau, on the utility of man's believing in a deity and in the immortality of his own soul.

Our analysis has already extended to so great a length, that we could not now enter on the consideration of the fourth part, a collection of cases in proof of the author's doctrines, even if it were susceptible of analysis. These cases, however, all tend to shew that the head is the seat of the disorder.

M. FALRET ON HYPOCHONDRIASIS *.

THE design of this Essay, is to prove that the seat of hypochondriasis is in the head, and that the disorder of any other organ can seldom be regarded even as its remote cause. It is intended also to examine the modes of treatment that have been used to resist its progress, and to state what he conceives to be some improvements in that practice. We have then a rapid view of the opinions of physicians, from Hippocrates downwards, from which it appears that the abdomen, and more particularly the spleen and stomach, were regarded as the seat of hypochondriasis. But in announcing his own opinion, M. Falret acknowledges that it is not new; Flemyng, Cullen, and Georget having all fixed on the head as its seat; the first so far back as 1741. The opinion is also supported by pathological anatomy.

The CAUSES of hypochondriasis are hereditary predisposition, extreme susceptibility, natural or acquired, painful affections of the mind and severe study: in a word, its causes, for the most part, are moral and intellectual. He thinks that too much importance has been attached to causes merely physical, and is of opinion, from a careful analysis of facts, that the suppression of the hæmorrhoidal discharge, and of the menses, so far from producing hypochondriasis, is generally occasioned by it, as an affection of the brain. The number of symptoms in this disease is very great, for there is scarcely a part of the body which does not feel its effects, especially if it has been of long continuance. When its prime phenomena are in the neighbourhood of the head, why are they thought to be sympathetic of disorder in other organs? There are five principal causes of this error in diagnosis. The first is, that the brain is seldom suspected of being the primitive seat of the disease, because the intellectual faculties are rarely affected at its commencement, and often remain uninjured during the whole course. The second is, that physicians generally come to the examination of hypochondriasis prepossessed with the idea that its seat is in the abdomen, and consequently they attend chiefly to abdominal symptoms and neglect those which they conceive to be merely adventitious to the disease, or totally unconnected with it; and though the cerebral symptoms must be often forced

* De l'Hypocondrie et du Suicide. Considerations sur les causes, sur le siege et le traitment de ces maladies, sur les moyens d'en arreter les progrès et d'en prevenir le developpement; Par. J. P. Falret. 8vo. p. 512. Paris, 1822.

upon the observation even of the most superficial enquirer, yet some physicians have declared that after attending for twenty years to hypochondriasis in all its forms, they have constantly observed the chylopoetic viscera to be primarily affected.

What will those physicians, who place the disease in the abdomen, say of that species of it, which is attended with palpitation of the heart, spasmodic contraction and oppression of the breast, and with those exaggerated fears of danger, which such symptoms infallibly occasion in patients of a sensitive habit, when there is no complaint whatever in the abdomen? What will they make of those cases, in which the patient, complains bitterly of dizziness, stupor, buzzings in the ears, &c. and expects every moment to be seized with apoplexy? Or what seat will they assign to that hypochondriasis, in which patients, agitated by the fear of syphilis, give themselves up to the vagaries of imagination, and in every little pain they are troubled with, see either a fore-runner or a consequence of that malady? In their attempts, therefore, to cure hypochondriasis, most physicians have attended only to particular symptoms; or reasoning hypothetically on its causes, they have employed a variety of remedies, which, so far from attacking the disease in its seat, have only partially relieved it by obviating some of its effects. The author's plan of cure is conducted upon a very different principle; he goes at once to what he conceives to be the fountain head of the disease, and founds his treatment on the facts which support his opinion.

If in real hypochondriasis, the general sensibility of the patient is increased, if he is affected with a variety of spasms, if he is much alarmed about every thing connected with the state of his health, if his character is quite altered, and his affections have become changeable; if, in short, these are prominent symptoms of the disease, we are forced to acknowledge that the hereditary predisposition to it resides in the head. It has been observed that those subject to the disease are pusillanimous, melancholy, morose, and indolent; although it must be allowed that there are numerous exceptions to this statement. The most common time of its invasion is from the age of twenty-five to that of sixty years: it having seldom been seen either before the first or after the second of these ages. Women are less subject to it than men, and when it attacks them, it is commonly about the time when the menses become entirely suppressed. Climate appears to have no effect in its production. It is a disease of a highly civilized state, and often is met with in the time of political convulsions. It can scarcely be ascribed to variations of weather, or to change of clothing; but a sedentary and at the

same time a solitary life, as observed in particular artisans, has a great tendency to excite it; whereas it is little observed in trades where the people work in common, or when the artist has his family round him. Onanism and venereal pleasures, by the powerful shock they give to the brain and nervous system, tend, perhaps more than any other cause to produce hypochondriasis. It is also very frequently caused by the exercise of the intellectual functions, when carried too far; and most men who have been incessantly employed in study have felt it more or less. This was observed by Aristotle. Medical men are often affected by it, but it is generally in the commencement of their career; and when they become better acquainted with diseases it commonly ceases. Even persons who know nothing of medicine, when they read medical books, or visit hypochondriacal patients, are apt to be affected by it. Poets, painters, musicians, all in short who cultivate the imagination, fall victims to it much sooner than those who are addicted to graver studies. Chagrin, fear, ennui, and, all painful affections of the mind are in the second order of occasional causes. Ennui is generally the cause of it in mercantile people who have retired from business, or in those who pass from an active to an idle life.

What our author calls the indirect occasional causes, are the direct causes of those authors who place the seat of hypochondriasis in the abdomen. Among them may be enumerated, a draught of very cold iced water, the abuse of spirituous liquors, of diluents, of tonics, and above all, of cinchona in the cure of agues. To those some authors add the too frequent use of tea; and many other things might be mentioned. M. Villermay enumerates in this manner the causes of hypochondriasis, in so far as they are connected with the organic textures of the French anatomists. 1. For the cutaneous system. Irregular perspiration, spontaneous stoppage of habitual sweats, general or partial; metastasis of some old eruption to an internal part, or the drying up of a cutaneous discharge. 2. For the Mucous system. Profuse discharges, the rash cure of a critical or habitual diarrhœa, the too sudden stoppage of an excretion from the nose or lungs which has been very abundant, or the suppression of gonorrhœa, leucorrhœa, or of the lochia, &c. 3. For the glandular system. Biliary affections of various kinds, too great a salivation or its sudden suppression, seminal discharges, involuntary and otherwise, &c. 4. For the sanguineous system. The retardation or retention of some periodical discharge of blood, suppression of the menses, hœmorrhoids, &c. M. de Villermay also mentions as causes, nursing too long continued, worms in the intestinal canal, and metastasis of rheumatic, gouty or syphilitic affections. From a careful analysis of the cases adduced

by M. de Villermay in support of his opinions. M. Falret has shewn that in almost all of those there was some strong cerebral cause in action, very capable of producing the disease. He gives a case at full length from M. de Villermay, which shews very plainly that the brain is the principal organ affected; and not satisfied with this triumph, the author echoes his opinions backwards and forwards for some time longer, but without adducing any new argument or fact.

Hypochondriacs complain of pain in the eyes, which is often regularly periodical; sometimes only one eye is affected. These organs appear occasionally to be larger during a paroxysm; at other times they appear to be sunk in their orbits; sometimes their eyes dazzle and they have optical illusions; they see objects dimly, and cannot look without uneasiness at a strong light or a brilliant colour. The arteries which enter the eyes sometimes throb, but with such force as actually to give pain. The ear suffers in like manner, the hearing often becomes preternaturally acute; at other times it is duller than usual, and often remains so ever after. Smelling and taste are similarly affected, and the latter is often much depraved. A hypochondriac has been known actually to have a dread of water and every other liquid. As the blood ordinarily runs freely to the head, the patients are generally well-coloured, a circumstance which has gained for them the appellation of imaginary invalids.

The colour of the face often varies; it is sometimes pale, and sometimes red: at one time the patient feels it all in a glow; at another it is quite cold; and all this seems to depend on the irregularity of the cerebral circulation. After a longer or a shorter time its appearance changes, it acquires an expression of sorrow, and has an unhealthy look, becoming yellow and of a bluish cast, in consequence of the liver and heart being sympathetically affected. In hypochondriasis the sense of feeling becomes exquisitely accute: the patients are strongly affected by the slightest cold or the most moderate heat. They are also acutely sensible of the electric state of the atmosphere and of sudden variations of temperature. In such patients, when we feel the pulse at the carotids, it is quick and bounding, and the arteries of the brain, often independently of any exertion, beat with great violence; the patient's eyes sparkle, his cheeks glow, and he affirms that he feels a strange agitation in his head, and pulsations so distinct that they can be counted. These phenomena are oftenest observed when the patient is going to sleep, and they awaken him suddenly. Sometimes the patient feels as it were stunned, and has frequent attacks of a kind of weakness, which we cannot call syncope, but to which we think

sufficient attention has not been paid: at such times they do not generally lose their senses, but feel as if they were annihilated; and their look is not much changed during this state, which is commonly of very short duration. Want of sleep is a predominant symptom from the very commencement of hypochondriasis, and the short intervals of sleep which they do gain are disturbed by sad and fearful dreams. This state of sleeplessness becomes often the cause of cerebral irritation. To procure sleep the patient has recourse to opium, which generally has a bad effect. Hypochondriacs are habitually troubled with head-aches, which, with want of sleep, often precedes all the other symptoms: it is sometimes all over the head, but oftenest in the course of the sagittal suture. They have generally a sense of great weight in the head: and at times they feel as if it were squeezed in a vice. The integuments of the head are so exquisitely sensible, that the patient complains of pain in his very hair. *(See Baron Larrey's Case in our Encyclopædia Med.)*

At the commencement of hypochondriasis, the intellect in general is rather acute than otherwise; but in a short time the ideas become irregular and confused; and in some cases the patients complain that they cannot fix their attention upon any one subject; the memory fails, but the judgment is still sound, if we except that part of it which is connected with the patient's health: but the imagination is very active and restless, and in the last stage of hypochondriasis there is often real mental derangement.

The feelings or sensations of hypochondriacs are so various that it would be an endless task to enumerate them; but it being the custom of such patients to be in a state of constant anxiety about their health, they are in the habit of considering the most trifling accidents as bad omens, and of thinking that the functions of some organs are much deranged, when in reality they are quite regular. In one day, or even in a single hour, they will complain of pain in parts of the body, the most opposite to each other. And if they happen to be in company with a person who is troubled with any particular complaint, they generally imagine that they are attacked with a disorder of the same kind; and should any friend of theirs die of aneurysm of the heart, or other disease, they immediately fancy that the same fate will be theirs. Gloom will sometimes overspread them to such a degree, that suicide is resorted to as their only relief; even in their worst state they are afraid of losing their senses: they will submit to any thing to be cured; and for a time will follow most pointedly the directions of their physician; but they soon tire of that very plan which at first

inspired them with hope, and fly eagerly to some new remedy. At length their very nature seems changed; activity is succeeded by the most complete apathy: and he who in the morning will receive you with smiles, will not deign to speak to you in the evening. In company, according to our author, hypochondriacs are disposed to be satirical, owing probably, to an involuntary disgust with which they regard relations, friends, and even strangers.

The voluntary muscles appear to be affected with great weakness, so as almost to approach to palsy, but being all imaginary, it is generally of short duration. The patient also complains of great weight, insensibility, and lassitude in the thorax and abdomen. He is annoyed by spasms and quiverings of the muscles; he has a sensation as if insects were creeping all over him; he is troubled with shivering, numbness, and tightness in his breathing, and he feels as if some one were grasping him by the throat.

Such are the symptoms depending on an organic modification of the brain, which actually constitute hypochondriasis, and without which it cannot exist. The next order of SYMPTOMS are the sympathetic, which are commonly looked upon by physicians as the primitive ones. Digestion is depraved, acid is secreted from the stomach, and there is often a profuse discharge of saliva. One patient fancied this to be the effect of mercury which he had taken formerly; and he was so possessed with this idea, that he thought he saw its globules under the scarf skin, and proposed to have them let out by an operation. After eating, the hypochondriac feels a tightness and fulness about the stomach, and he has a feeling of tension more or less painful in the hypochondria, and indeed all over the epigastric region. These parts, likewise, are sometimes much blown up with wind; he is troubled with nausea, and throws up stuff from his stomach, varying in quantity and colour, but which is sometimes black; and this last circumstance gave rise to the opinion of the antients, that hypochondriasis was produced by black bile. He is subject to habitual costiveness, although occasionally he has a diarrhœa; and both these states most probably depend upon a vitiated secretion of bile; and it is owing to this that the colour of the fæces so often varies. He is much troubled with croakings and flatulence in the abdomen, and he attaches so much importance to these symptoms that he often blames them as the cause of all his complaints. They trouble him most after eating, and he suffers more from them at night than in the morning. A great flow of urine has been regarded as a characteristic symptom of hypochon-

driasis; and we observe the same thing happen in sudden affections of the mind. Diabetes is sometimes present. At times, the mucous coat of the bladder is affected with inflammation, and there is often spasm or paralysis of that organ. But it is some time before nutrition is sensibly impaired; and the hypochondriac preserves his colour, and complains for years before his friends will believe that any thing ails him. Yet the physician who places the seat of the disease in the brain will be of a different opinion. At length the hypochondriac loses his plumpness, his muscles become soft, his complexion pale, his skin loses its natural colour and freshness; it is dingy and dirty, and covered with a variety of anomalous eruptions. There are palpitations of the heart coming on in fits, and lasting for some time at each attack; and occasionally an intermission is observed in the pulse at the wrist. Other parts of the sanguiferous system are affected likewise; and even sometimes all the arteries of the body are thrown into tumultuous action. This happens oftener than is commonly imagined. Hypochondriasis seems in general to have little effect on either the menses or hæmorrhoidal discharge. Respiration is sometimes so much affected as to approach to asthma. The cough that is present is commonly small, dry, and severe, as in persons of the nervous temperament. The patient at times is also troubled with hiccup, and even loses his voice.

Such are most of the sympathetic symptoms. In acute hypochondriasis they are often not present; but when they are, have we any better idea of the seat of the disease? The very nature of these phenomena demonstrate, M. Falret thinks, that the brain is the real seat of hypochondriasis. How otherwise could they be so irregular, if they were not sympathetic of an organ, from which emanate all feeling and all motion? How otherwise could they follow one another with such rapidity, or, after lasting ten or fifteen years, vanish as if by enchantment, by the agitation of some moral impulse, or in consequence of the intellectual faculties having received another and a better bias? If digestion is more disordered in this than in other diseases, does it not depend on the intimate connection subsisting betwixt the abdomen and the brain? And though disorders of digestion are frequent in peripneumony, do we ever say that they are characteristic of that disease? He regards these symptoms as *nervous*, but he thinks that they depend on some affection of the brain. Could the digestive organs if attacked with any, even the mildest, inflammation, as some physicians think, continue so long after hypochondriasis has commenced, to perform their functions? Would not emaciation and fever quickly follow it? And

if gastric and intestinal inflammation at length ensue, is it not owing to the greater susceptibility of the parts, induced by cerebral disorder from the preposterous regimen of the patient, and from the use of aromatics, tonics, and purgatives? The physician is often drawn away from the real seat of hypochondriasis by the patients, who magnify their pains, and endeavour to attract all his attention to the sympathetic symptoms; and should he hint at the state of their intellect, or their feelings, they wave the subject, affirming that their senses are as sound as ever, and blame a loaded stomach and indigestion. Yet the contrary is evident from their head-aches, want of sleep, inactivity of mind, strange feelings, and other nervous symptoms. They may confess that their nerves are too delicate and too irritable, but they are far from thinking their brain affected, and would not be pleased if you said so. Indeed, till very lately, physicians themselves would hardly allow the brain to be affected, unless the patient was mad, or had an apoplexy.

Physicians, of different ages and countries, have given names to hypochondriasis, expressive of what they imagined to be the seat of the disorder, but all of these our author conceives to be erroneous, and he proposes to give it the name of *Encephalopathy!* or brain affection. To prove that he has enumerated correctly the symptoms of hypochondriasis, the author next submits to analysis a number of cases borrowed from his antagonists, particularly M. de Villermay, and most of which, he declares, appear at first sight to be the least favourable to his purpose, but which he has chosen in preference to his own, that there might be no suspicion of foul play. He has supported his opinions by ingenious, powerful, and plausible argument, which well deserves the examination of those who refer all to the organs of digestion. In some cases hypochondriasis is acute, and rapid in its progress, but in the generality of cases it is a chronic disease, and tedious in its course. It varies exceedingly, and sometimes puts on a real intermittent form, and then goes by the name of vapours. Of its numerous complications M. Falret thinks it unnecessary to speak, as it would uselessly carry his attention over the whole field of pathology.

With regard to PROGNOSIS, authors have given various opinions. We shall mention in particular those of Tissot and Baglivi. The first says, the disease resists every remedy and is scarcely curable. The second gives a more favourable prognosis. He says, although at first sight the diseases of such patients seem to be destructive and incurable, they commonly admit of easy cure, not indeed by a great number of medicines, but by the agreeable conversation of friends, by innocent rural amusements,

and frequent exercise on horseback, or by a regimen prescribed by a sagacious physician. We think that the prognosis should be given in a line betwixt these two opinions. That species of the disease which is produced by some powerful moral cause, or by excessive venereal pleasures, is much more dangerous than that which proceeds from immoderate exercise of the intellectual faculties. Our prognosis must be more or less favourable in proportion to the difficulty which we experience in removing the patient from the producing causes. There is greater danger in acute than in chronic hypochondriasis, but in general it is more easily cured. If the patient become greatly emaciated, and the expression of his countenance be entirely changed, it is a sign that the disease is incurable. Much will depend also on hereditary predisposition. Authors pretend that hypochondriasis is terminated favourably by the return of the menses, the hæmorrhoids, the gout, &c. and by the appearance of eruptions; but M. Falret allows only that the remedies employed, have contributed to the cure of the cerebral affection by occasioning a favourable derivation, and that the return of eruptions, diarrhœa and sanguineous discharges have been useful, by continuing the revulsion long enough to allow the brain so far to recover a healthy action, for it always remains susceptible, and the hypochondriasis often returns. If the acute species be improperly treated, or if it resists the most approved remedies, it often ends, after lasting a month or two, in an ataxic fever; and the chronic kind often terminates in apoplexy or madness. Hypochondriacs, in general, die of chronic inflammation of the intestinal canal, of aneurysm of the heart, or of pulmonary affections; and these are the organs that are always most affected by cerebral changes.

On OPENING THE BODIES of hypochondriacs, the attention of physicians has generally been directed to the supposed seat of the disease, the liver, spleen, and other abdominal viscera; but in our author's opinion, were the brain carefully examined, it would often be found in a state of disease. Even however, if no sensible change should be detected in the brain, we ought by no means to conclude that it is not the seat of hypochondriasis. In the few cases that have been examined, the vessels of the brain itself have been found more turgid than usual, a gelatinous serosity has been observed betwixt the arachnoid coat and the pia mater, and in the ventricles, and the brain has been found softer than it naturally should be.

As the seat and nature of a disease should be known before we attempt to CURE it, it may easily be imagined how much he differs in his curative views from those physicians who have placed the seat of hypochondriasis in the stomach, or some other

organ of the abdomen. They directed their remedies to whatever part they saw most affected; and the multitude of sympathetic phenomena, the long duration of the complaint, and the fondness of the patient for medicines, have occasioned a very great and a most disgusting use of drugs in this disorder. Having thus simplified hypochondriasis, by assigning to it a cerebral origin, M. Falret in the first place directs all his curative means to the brain, and attends afterwards to the secondary symptoms. The irritation of the brain must be moderated and its functions regulated. The author here refers us to his direct treatment of suicidal melancholy, a great part of which may be applied to hypochondriasis. We should try to gain the confidence of the patients, we should sympathise with them, and listen with attention to the tedious enumeration of their complaints; for they are too apt to think that the physician, like others, regards them as imaginary invalids. We should take care that our words have no double meaning, as the hypochondriac will, to a certainty, interpret them in the most unfavourable sense. We should attack none of their propensities abruptly; and should on no account inform them that their brain is diseased; for in this way we shall never gain their confidence. Nor should we directly oppose the tendency which they have to make an improper use of medicines. In short, that the intellectual and moral treatment may be more successful with our patient, we should interest him by paying a particular attention to the idea that for the moment rules him. This might be hurtful in melancholy, but it seems in general to be well adapted to the cure of hypochondriasis. However, it has limits which we must not pass; for instance, if the patient despair of a cure, we must speak to him in a consolatory manner, and make our looks correspond to our words. By an opposite conduct his misery would be increased. Afterwards, though still acknowledging their reality, the physician may gradually insinuate that the patients make too much of their suffering, and of the danger that may result from their disease; but on the other hand, if he make little impression on them in this way, he may gently hint that their disorder may have rather troublesome consequences. He should talk often with them, and in the course of conversation should get animated, and even sometimes seem to be a little warm; but in general he should speak and act with caution, mildness, and circumspection. As the hypochondriac is too much occupied with himself, we must by degrees bring him to be interested with other people, by increasing his connections with them, by directing his mind to new objects, and by calling some passion into action. Let him live in agreeable society, and let the phy-

sician procure for him, if possible, the consolations of friendship. But great care should be taken not to let too strong an impression be made at any time on his brain. He should never be allowed to feel sudden variations of temperature. Is it not evident that muscular exercise, by bringing on general fatigue, and forcing the brain to repose, must be attended with advantages? Exercise on horseback is useful, as it requires the patient's continued attention; but of course those who are irritable must go at a gentle pace, and the duration of the ride must be proportioned to the strength and irritability of the patient. But his exercise ought to have some object, and it should be used both before and after meals. Travelling is of great service to hypochondriacs, by removing them from those objects and employments which occasioned their malady; and in another climate, every thing being new, the patient's habitual ideas undergo a change, and his diseased susceptibility is lessened. When physicians have renounced those remedies directed to the cure of symptoms, and have followed the plan here recommended, and when patients have had the good sense and the courage to fly from physicians who delight in drugs—either a cure or an evident amendment has been the fortunate result.

A moderately antiphlogistic REGIMEN should aid the moral and intellectual means. Leeches applied behind the ears, or to other parts of the head, and cold applications to the same place, are also useful. It is not necessary here to enumerate the medicines that act usefully on the brain, since that has been already done in our paper on Suicide. When the secondary symptoms remain after the removal of the cerebral affection, or if they are troublesome during its continuance, they must be treated according to the principles of general pathology. The flow of the menses or hæmorrhoids, it may be proper to favour by direct means: and excretions from the bowels may be favoured by purgative glysters, and particularly by glysters of cold water. Every thing should be done to prevent acute or chronic inflammation in the organs of the abdomen. Physicians acknowledge that the sensibility of the intestines is increased in hypochondriasis, and yet they order for their patients bitter chalybeates, aromatics, purgatives, and absorbents—medicines which are all more or less irritating and dangerous. I have been told, says M. Falret, that I reduce the treatment of hypochondriasis to nothing; but is it nothing to direct the treatment to the suffering organ, the *primum mobile* of all disorders? But I say not that we should abstain from every kind of medicines. I wish only that we should never lose sight of the brain as the seat of the disease. Let demulcents or emollients be employed

in almost endless variety, and let irritating remedies be used sometimes by way of derivation, but always let them be directed to viscera which are the least susceptible of irritation. In the use of medicines, we should consider the influence which they have on the brain. The food should be simple, mild and of easy digestion. Aromatics should not be used. The stomach should never be loaded; nor should the patient study during digestion. Warm baths, continued for hours, are often useful. Frictions, by rendering the capillary circulation more active, are often of great service. Winter clothing should be worn before cold weather comes on, and it should not be laid aside till the weather has again become quite warm. Hypochondriacs should reside in an elevated situation and one which is dry and well-aired. M. Falret concludes with an observation of Lancisi's. "All the aids of medicine are uncertain; but there is one circumstance which, at all times and in all cases is efficacious; it consists of a mode of living regulated by wisdom, and of a happy serenity of mind, which is ruffled neither by prosperity nor adversity."

M. Lemaire on the Teeth *.

The history of the structure and formation of the teeth has exercised the ingenuity of many of the best physiologists of our own and other countries; of modern times, it will be sufficient to mention the names of Hunter, Blake, Bichat, Cuvier, Blumenbach, and Blainville. Those who are best acquainted with the subject will readily admit the claims of our countrymen to the honour of priority and excellence in these researches; and the proofs of this are in no instance more complete than in the work before us.

The present volume is the first of three, in which the author proposes to treat successively of the physiology, the pathology and methods of curing diseases of the teeth; but this, for obvious reasons, is the only one of the three which is likely to prove generally interesting to our readers. It is proper to remark, that notwithstanding many professions of originality, to which the French are so prone, little is to be found which would be absolutely new to an English reader, or any one familiar with the Treatise of Hunter, and, more particularly, with that of Blake.

* Traite sur les Dents; par M. le Chevalier Joseph Lemaire, Chirurgien dentiste de S. M. le Roi de Bavière, &c. 8vo. Paris. 1822.

This may not be, and very probably is not the case in France, for as M. Lemaire remarks, the article on the anatomy of the teeth written by M. Cuvier in the Dictionnaire des Sciences Medicales, is little more than a copy of what Hunter has said on the subject, even his errors not excepted. However this may be, we will leave it in the power of our readers to judge, by giving an abstract of the author's facts and opinions, so far as they appear to be useful or interesting.

Some have pretended to have seen the MEMBRANOUS CAPSULES of the teeth one month after conception, and the pulps at the end of two, but there can be little doubt that this opinion is incorrect, and that more confidence is to be placed in the statements given by the generality of physiologists. The alveolar groove cannot be distinctly seen until the third or fourth month. It is not until this time that it is possible to distinguish in each of these grooves the rudiments of twelve teeth, of which ten belong to the temporary teeth, and two to the anterior permanent molares. Of the capsules, at this time, some appear to contain a pulp, but, for the most part, there is only a viscous fluid. The capsules appear to be derived from the gum, at least they adhere so firmly to its inner part, that if it be taken away the capsules follow without detaching the vessels and nerves at the bottom of the alveolar cavity. In fact, these vessels and nerves have no attachment to the capsule, which appears like a vesicle. They soon however enter it, and deposit a transparent, gelatinous, thick and very vascular substance; this substance becomes gradually firmer, and constitutes the pulp, its form being nearly similar to that of the future tooth.

Between the fourth and fifth months the vessels of the pulp begin to deposit the earthy substance, which, by its induration, forms what is called the BONE, but which M. Lemaire names the *shell* of the tooth. This deposition first takes place on the tops of the central incisors. At this period all the capsules are placed in separate alveoli, excepting those of the two anterior permanent molares which are in the same alveoli with the temporary molares. The shell of the lateral incisors is soon formed; it next begins to shew itself on one of the eminences of the anterior temporary molares, and lastly, on the points of the cuspidati, and one of the eminences of the posterior molares.

In a fœtus of eight months, this shell is pretty considerable on all the temporary teeth; and it even begins to appear on one of the eminences of the anterior permanent molares. At nine months, the crowns of the temporary teeth are perfect, those of the first permanent teeth have made some progress, and these teeth are placed in separate alveoli.

Nature appears to take more pains and a longer period for the formation of the permanent teeth. M. Serres *(See Quarterly Journal, Vol. I. p.* 369) pretends that he has distinguished all the capsules of the permanent teeth in the fœtus of three months, but there is every reason to believe that he is mistaken in this opinion, which is so completely opposed to the researches of the best anatomists. As has been already stated, the capsules of the anterior permanent molares are manifest in the fœtus of four months; but at this period Blake and Fox could find no traces of any others of the second set of teeth. Hunter even goes so far as to assert, that the capsules of these two teeth, and of the permanent incisors, are not perceptible until between the seventh and eighth month. But on this point, as as on most others, M. Lemaire prefers the opinion of Blake, adopted by Fox, to that of Hunter. Blake could not see the pulps of the permanent incisors and cuspidati until the eighth month: at that period they were placed in the same alveoli with the temporary teeth, slightly sloping behind them, and touching the inner edge of the alveolus. At nine months he found these teeth perfectly separated from those of the first set. The pulps of the central incisors were more developed than those of the lateral ones, and of the cuspidati; they were elongated in the alveolus, and the shell had begun to form. The author has always found the teeth of the full grown fœtus precisely in the state described by Blake, and has never been able to discover any traces of the bicuspidati, the central or posterior permanent molares. Seven or eight months after birth, the permanent central incisors are much advanced, and their shells are nearly complete. In the fourth year, the bodies of the incisors, of the cuspidati, and of the first permanent molares are formed; the upper surface of the central permanent molares is almost entirely covered with its shell; the bicuspidati begin to be covered with theirs, and the capsules of the posterior permanent molares are in some degree developed.

The author here enters upon a part of his subject which has divided the opinions of most of those who have discussed it; we mean the question as to the period at which the greatest number of teeth and their rudiments are to be found in the jaws; and the estimate of the total number. Blake asserted that this period was the fourth year; all the temporary teeth being then visible, and the rudiments of the thirty-two permanent ones being completely formed. Hunter believed that the second bicuspidatus was not formed until between the fifth and sixth years, and that the rudiments of the posterior permanent molares, or dentes sapientiæ, were not visible until the twelfth. Fox agrees with Blake, except with regard to the dentes sapientiæ, the formation

of which he supposed to commence between the eighth and ninth year. M. Serres, as we have already said, supposed that he had distinguished the rudiments of all the teeth, of both sets at the third month after conception; but there is little reason to doubt that on this point he was misled by his glasses, or by the desire of making a discovery. M. Cuvier implicitly adopts the opinion of Hunter, who thinks that the greatest number of teeth or rudiments is forty-four at one time, namely, in the seventh year. Fox fixes on forty-eight, and asserts that they are found in the sixth year. The author leaves the question in the state of doubt in which he found it; he contents himself with saying that he adopts the opinion of Blake, which he considers as most worthy of confidence, and most accordant with his own experience, without offering any additional facts in its favour.

In the actual FORMATION of the teeth there are certain circumstances in common to both sets. We do not think that the author has been very successful in the manner of explaining them, and for that reason we shall not follow him strictly, but give the facts as plainly as we can. The rudiment in the first instance, consists of a membrane forming a closed sac, like those of the serous class, and for that reason considered so by Bichat, though perhaps not very correctly, if we consider the peculiarity of its functions. Like the serous membranes also, the capsule presents two portions of which one is attached to the gum and the other is protruded into the first; the point of reflection or the communication between the two layers is at the bottom of the alveolus. The portion attached to the gum receives its vessels from that part. The inner layer of the capsule has originally on its outer surface a viscous fluid. In progress of time this, fluid is seen to be penetrated by a certain number of branches from the upper or lower dental arteries, according as the rudiment is placed in the upper or lower jaw; this number is regulated by the number of fangs of the future tooth; one artery to each fang. The inner, or inflected layer of the capsule, derives its nourishment from these branches only, and not from the gum, with which it has no direct connection. In proportion as these branches increase in size, the firm and vascular pulp is deposited in the place of the viscous fluid, situated on the outer surface of the inflected layer of the capsule. From this statement it will be seen, first, that the pulp is situated on the outside of the inflected layer of the capsule; secondly, that it is attached to the bottom of the alveolus only by its vessels and nerves; and thirdly, that, covered by the inflected layer of the capsule, it projects into the bag formed by the external one; so that, if after removing the gum we divide the outer layer of the capsule, the

serous surface of the inner one will present itself extended over a little ball, which is in fact the pulp.

M. Lemaire states, that the vessels of the pulp penetrate both layers, but this is evidently impossible and clearly proves that he has neither accurately observed nor perfectly understood the disposition of the parts which he attempts to describe. The external layer is, in fact, supplied by the gum, and the internal by those branches, which, when more developed, deposit the pulp and correspond to the fangs of the future tooth. The assertion of M. Lemaire is as incorrect as if it were said that both layers of the pericardium were supplied from the vessels of the heart ; or both the layers of the pleuræ from those of the lungs. His ignorance is rendered more evident when he supposes that Bichât's comparison of the capsule to a serous membrane was confined to the inner layer. He cannot surely have read what he says on the subject, or have seen the capsule in situ. So much for his high pretensions to accuracy and novelty.

When the pulp has acquired a certain degree of developement, and has assumed the form and size of the tooth of which it is the mould, it begins to secrete (M. Lemaire says to *transude)* a calcareous substance, which forms as many distinct shells as there are eminences on the pulp. These little shells according to our author have no connection with the pulp or inner membrane of the capsule ; but we should think it more correct to say that this connection is very slight. They become larger by successive depositions at their edges, and ultimately unite into a single shell : this gradually extends at the sides as far as the point where the inner layer of the capsule is attached to the lowest part of the pulp. By this means the crown of the tooth is formed exteriorly, and is increased in thickness by the addition of concentric layers of calcareous matter under the first ; the innermost of these, or that nearest the pulp, being always last formed and smallest, from the circumstance of their being deposited around the lower part of the pulp, which corresponds to the neck of the tooth.

Thus far we have spoken only of the crown or substance of the teeth ; we proceed to the mode in which its remaining parts are formed, namely, the ENAMEL and the FANGS. The crown or shell of the tooth is formed by the deposition of calcareous matter on the pulp from within outwards ; the enamel, on the contrary, is deposited by the inner layer of the capsule from without inwards : it is at first a thick mucilaginous fluid containing a yellow calcareous matter. It unites with the shell of the tooth and forms a hard, polished surface

disposed in perpendicular striæ. In proportion as the enamel is deposited, the inner layer of the capsule, having performed its functions, is removed, probably by absorption.

After the shell of the tooth has been formed and covered by enamel, the external layer of the capsule becomes closely adherent to it, at its neck. The pulp is connected only to the same part of the shell at its inner part, or next to the cavity of the tooth. It is not until this period that the formation of the fangs commences. The pulp, which had gradually contracted into the cavity of the tooth, in proportion as it secreted the successive layers of the shell, becomes elongated, extending itself upon the vessels and nerves which penetrate into it from the bottom of the alveolus. The calcareous matter of the fang is then deposited around this elongation of the pulp, but according to Hunter and Cuvier, without adhering to it. This elongation, it is to be observed, always precedes the calcareous deposition to which it seems to serve for a mould. It is not the result of any augmentation of the size of the pulp. In proportion as it becomes longer it diminishes in size, and with it the quantity of calcareous matter, so that the fang forms a conical tube ending in an aperture for the passage of vessels and nerves. Where the tooth is to have more than one fang there is a slight variation in this process. In such cases a number of osseous fibres, proportioned to the number of fangs, arise from opposite points of the cavity of the shell of the tooth. These fibres unite in the midst of the vessels and nerves of the pulp, so that the cavity of the tooth is divided into as many little openings as there are to be fangs. The pulp then elongates itself into as many portions as there are openings, and upon each of these the calcareous matter is deposited in the manner already described. From these and other circumstances, M. Le Maire attempts, with considerable ingenuity to support the conclusions which he has drawn as to the differences between the structure of the crown and the fangs of the teeth. As soon as the enamel has been completely formed, the inner layer of the capsule having performed its functions, is absorbed, whilst the external one acquires a very intimate union with the neck of the tooth. Hence, he argues, that it is fair to suppose that this layer has a considerable share in the formation of the fangs, and that it stands in the same relation to them as the periosteum of bones. This idea is supported by observing that the artery which penetrates into the tooth ramifies when it arrives at the central cavity, while, on the contrary, the vessels of the outer layer of the capsule are more minutely divided in proportion as they approach to the bottom of the alveolus.

Hunter, and after him M. Cuvier, asserts that no vessels pass from the side of the socket into the fangs of the teeth, but our author affirms that in the grinding teeth of a calf he has seen vessels passing from the cavity of the fang into the periosteum, and probably, contributing to the formation of the fang.

We have hitherto spoken only of the circumstances common to the formation of both sets of teeth; we proceed, in the next place, to make some observations on those peculiar to the PERMANENT SET. When the pulps of the temporary teeth have acquired a certain degree of developement, and before they have begun to deposit the calcareous matter of their shells, the external layer of each capsule presents, at its upper part, an appendage which is the rudiment of a capsule of a permanent tooth. At first this rudiment is placed in the same socket as the capsule of the temporary tooth from which it originates, and to which it adheres to firmly that it cannot be separated without laceration, though both may be easily drawn together out of their common socket. It is probable that this close connection has deceived those who were unable to discover these second capsules. It is singular that Mr. Hunter should have seen and alluded to these appendages without being aware of their nature and uses. In proportion as the rudiments of the permanent teeth increase, the sockets of the temporary set enlarge and ultimately form separate sockets for the second set, though there still remains a hole directly under the gum by which the capsules of both teeth communicate. Blake, from whom this description is derived, adds, that after the formation of the capsules of the permanent teeth they remain at the bottom of the socket, whilst the temporary teeth are elevated and penetrate the gum. The edges of the alveoli being raised in proportion as the fangs of the temporary teeth increase, the consequence is that the rudiments of the permanent teeth are placed at a greater depth, and the membranous fibres which connected the two capsules are elongated so as to resemble a nervous filament reaching to the gum, and attached to the neck of the temporary tooth. The hole under the gum allowing the connection of the capsules of the temporary and permanent teeth, and the subsequent elongation of this connection, which were so long since and to well described by Blake, have lately been brought forward as discoveries by two French writers, MM. Serres and De La Barre, of which each claims the honour to the exclusion of other. The parts in question have been named by these gentlemen "gubernaculum" and "iter dentis." The capsule of the first permanent molaris is given off by the last temporary; that of the second permanent molaris, after a certain time from the first; and that of the third again, from the second.

The rudiments of the temporary teeth are disposed in a regular arch, but as they increase more rapidly than the jaws, it often happens at the period of birth that some of the teeth, particularly the cuspidati, are placed within the circle, the sockets of the lateral incisors and anterior molares in this case being almost in contact. The inconveniences arising from this cause are, however, in general, remedied by the subsequent increase of the jaws, so that it rarely happens that there is any great irregularity in the temporary teeth. This is not the case with the second set. The rudiments of these teeth are at first contained in the same sockets as the temporary set, but are afterwards separated from them by osseous partitions. They are, by this means, placed on the inner side of the sockets of the temporary set, and consequently occupy the narrowest part of the circle of each jaw. The progressive increase of the permanent teeth in this situation, forces the jaws to extend themselves forwards, and to acquire an increase of thickness on their inner side, that next the cavity of the mouth; and even notwithstanding this enlargement, the teeth often become irregular, some of them, particularly the cuspidati, being thrown inwards. Hunter asserted, that although every part of the jaws increased in size during the first year after birth, from that period the increase was limited to the posterior parts, and did not concern the segments of circles formed by the anterior parts of the jaws. There is every reason to believe that in this opinion he is mistaken, and that the opposite one, advocated by Blake, is more consonant with facts. In support of his assertion, Hunter has given a plate, representing the left side of the lower jaw at four different periods; namely, before the appearance of the first permanent molaris; after this tooth has appeared; after the appearance of the second permanent molaris; and lastly, after the third, or wise tooth, has appeared. But the only things which it renders certain are, that a considerable increase takes place between the last temporary molaris and the coronoid process, and that the angle formed by that process and the rest of the jaw, becomes gradually less and less obtuse; two facts which are admitted on all sides. It is well known that the permanent incisors are nearly double the size of the temporary ones, whilst the bicuspidati, which occupy the place of the temporary molares are only one third less; this fact is wholly incompatible with the opinion of Hunter, and with an hypothesis advanced by M. Duval, namely, that the space occupied by the anterior teeth always remaining the same, the increased size of the incisors is compensated by the diminution of the bicuspidati as compared with the temporary mo-

lares. Besides these, many circumstances support the doctrine which the author advocates, and which he derives from Blake. Thus it often happens that before the shedding of the temporary teeth, particularly in the sixth and seventh years, large intervals may be remarked between the incisors which were originally in contact. In many instances the permanent incisors, though at first irregular, ultimately assume their natural disposition, which certainly could not occur without an increase of the front of the alveolar arch. Dr. Blake has in his possession an upper jaw, on the right side of which the temporary cuspidatus remains, the permanent one being protruded through the gum at the inner side of the alveolar arch ; on the left side all the teeth are regularly placed. On examining the relative situation of the anterior permanent molares, he found that the one on the right side was nearer to the symphysis than that on the left, and that the difference in the distance between these two points corresponded to the difference in the size of a cuspidatus of the temporary and permanent sets. (*Dissertatio Inaug. p.* 45.) He has also remarked that the cuspidati, which are frequently longer in appearing than the bicuspidati, are at first irregularly placed, but are restored to their natural situation ten months or a year after their eruption.

It may be expected that we should say something on a subject which has divided the opinions of those physiologists who have most attentively considered it ; we mean the organization of the teeth. It is not so easy to give a satisfactory answer to this question as might be supposed by those who have not directed their attention to it, or those who have hastily embraced one or other side. The facts and arguments adduced by both are weighty. Thus the teeth of young animals receive a tinge from madder, which would seem to prove the existence of circulation in them, but when once this tinge has been given it is never removed ; and hence it is inferred, that, though supplied with vessels during their formation, the teeth have none in the later periods of life. Again, no anatomist has ever succeeded in injecting the substance of the teeth, but to this many objections may be made, as being inconclusive on the score of the imperfection of artificial means, and the question is asked of what use is the pulp? Of one thing we think there can be little doubt, namely, that the fangs of the teeth are vascular, and are connected by vessels to the periosteum of the socket, and not as Hunter and Cuvier suppose, mechanically as a nail in a board. The author of the book before us asserts the vascularity of the fangs, and, with Blake, calls the structure of the body of the tooth, shells; but this term must be used with

restriction, and as a distinction from the structure of bones, for with shell, properly so called, it has little analogy in its composition, and still less in the mode of its production; besides, when once destroyed it is never regenerated. The truth is, that a tooth is neither shell nor bone, but simply tooth, a structure sui generis. When we say that a tooth is not bone, we do not include its fangs; for as the mode of formation of the crown and fang are different, so probably are their structure, and that of the fang presents every appearance of bone.

We have reserved the mention of the occurrence of disease in teeth as a proof of their vitality, if not their vascularity, in the common sense of the word; and certainly this is a strong argument; for the commencement and progress of caries in the teeth has more analogy with vital changes than with any thing we observe in unorganized bodies. It seems to us to prove the vitality, though perhaps not the vascularity of the teeth. To obviate objections, it may be mentioned that the egg is alive long before it becomes vascular and organized, in the common sense of the word. This was Mr. Hunter's opinion, and even on the subject before us, although he denies the vascularity of the teeth, yet his own principles of adhesion require that he should admit their vitality, which he seems to consider a sine qua non; to use his own words, "On one side there can be no assistance given to the union, as the divided or separated part is hardly able to do more than preserve its own living principle, and accept of the union."—(HUNTER *on the Blood*, p. 365, 8vo. edit.)

ROCHOUX ON APOPLEXY *.

WE are yet to learn whether APOPLEXY is the result of compression of some part of the brain; or whether effusions, and other causes of pressure, are merely the effects of pre-existing disease. Cases which, at least, strictly resembled apoplexy are recorded, in which no cause capable of producing compression was detected; and others are to be met with, where, without the symptoms of apoplexy, effusions, tumours, and other supposed causes of compression were found to exist. It may be observed, that, with the exception of hemorrhage, the causes of compression are seldom of a nature to warrant us in concluding that they take place suddenly. To ascertain the precise share which

* Dictionnaire de Médecine, tome ii. 8vo. Paris, 1822.

compression might have in causing apoplexy, M. Serres instituted experiments upon the lower animals, the result of which shews clearly, that, at least in them, apoplexy could not be produced from compression alone. (*Quart. Journ.* vol. iii. p. 271.) But these experiments having been made on animals in which the brain was previously in a perfectly sound state, we are scarcely warranted to extend the conclusions drawn from them to apoplexy in man; in whom there is strong reasons for believing that an unsound state of the brain precedes the accession of the apoplectic fit. An examination of the effects of compression from external causes, we think, may satisfy any one that something besides the mere compression is requisite to produce all the phenomena of spontaneous effusion of blood into the substance of the brain.

A slight investigation of the various causes which, from time to time, have been supposed capable of producing a stroke of apoplexy, shews clearly that most of these have no foundation in truth; or at least that their effects have been greatly overrated. Tumours in the brain are of slow growth; the softening of its substance (*ramollissement du cerveau*), abscesses, and effusions of serum can only be considered as the slow and gradual results of inflammatory action; even extravasation of blood must be preceded by diminished power of resistance on the part of the vessels, or by a greatly increased force of the circulation in the head. It is true, we are told, that apoplexy is seldom preceded by premonitory symptoms; and on this head M. Rochoux says, that of sixty-three patients, whose histories he received, only nine exhibited precursory symptoms; and of these four were habitually subject to vertigo, which was not sensibly augmented immediately before the paroxysm. If we are to admit the whole of the preceding causes, we should expect that premonitory symptoms ought seldom to be absent. In a disease whose invasion is so sudden, the cause should also be sudden in its existence; or at least from being so slight as to give rise to no marked symptoms, to undergo a change capable of inducing the severe and instantaneous symptoms of apoplexy.

Upon this subject, the earlier writers, ignorant of anatomy, and the changes in structure which disease occasions, have advanced little except wild theory and crude conjecture. When anatomy began to be studied, new lights, it is true, were let in upon pathology, but the earlier anatomists were credulous in the extreme, often admitting as causes, many facts, which can be considered merely in the light of symptoms, or at least as exercising no influence whatever in causing apoplexy. Thus diseases of the heart, aorta, and other organs within the chest,

and even many affections still more remote, have had an undue share of influence assigned to them in producing a shock of apoplexy. Enlargment of the heart, the *hypertrophie* of French authors, has more especially been considered as a predisposing cause; but even to this M. Rochoux attaches no value whatever; for out of forty-two cases of apoplexy that he inspected with the greatest care, only two had enlargement, or any disease of the heart! We see then that accuracy and truth, though of slow progress, are the sure results of anatomical research: most of these causes, with the endless list of useless and even superstitious remedies which were supposed to act upon them, have one by one been consigned "to the vault of all the Capulets." The division of apoplexies, however, into serous and sanguineous, was still a fruitful source of obscurity and confusion, and of many fatal errors in practice, of which the excellent work of M. Portal furnishes so many striking instances. But M. Rochoux is a decided enemy to this division: he confines the term apoplexy strictly to hemorrhage within the brain; a view of the subject which he claims the merit of being the first to have announced to the medical world. No one in this country, however, can be ignorant that many years ago Mr. J. Hunter, in his inestimable work on inflammation, and in the evidence which he gave in the trial of Captain Donellan, for the murder of Sir Theodosius Broughton, took precisely the same view of the subject; though we are ready to confess that it has for the first time received an elaborate and systematic consideration by M. Rochoux.

To us it is apparent that effusion of serum, considered as a separate and uncombined affection, is not only a very distinct malady from hemorrhage in the brain, both as regards its nature and seat, but that the two can hardly ever manifest the same kind or order of symptoms. Effusion of blood, as a cause of apoplexy, is met with almost uniformly in the substance of the brain itself, where we can hardly suppose effusion of serum to take place—when blood is found in the ventricles, it may usually be traced to some ruptured vessels in the substance of the brain by means of a sinous communication. There could be no faith in diagnosis considered as a science, as is remarked by our author, if causes so totally different in their nature and situation were admitted as capable of producing the same train of symptoms. We cannot help thinking, therefore, that what is called serous apoplexy is really misnamed; and the evil effects of this division, in filling the minds of practitioners with undefined dread of debility, thus arresting their hand from the employment of our chief remedy, bleeding—free and decided

bleeding, we believe, are manifest to all. Effusion of serum, says M. Rochoux, is one of the most frequent consequences of apoplexy, and therefore one of the causes which most frequently renders it fatal. The number of individuals who die of this effusion nearly equals the number of those who perish through the immediate consequences of the hemorrhage. It is difficult to perceive how the one affection so often produces the other, though not more difficult than to discover why an organic affection of the heart, for instance, or larger blood-vessels, should produce hydrothorax. It is enough for us to know that apoplexy has great influence in producing serous effusions into the ventricles.

Effusion of serum then into the ventricles is to be considered as quite inadequate to produce the sudden and total abolition of sense and motion, characterizing apoplexy. Besides this concomitant or subsequent effusion of serum, tumours, abscesses, softening, sometimes with, sometimes without, extravasation of blood are discovered—nay patients have died with all the symptoms of apoplexy, without exhibiting, on inspection, the slightest trace of morbid change. Are we to attribute the death to compression, in such cases, especially with the result of M. Serres experiments in view, shewing, in certain states of the brain, how little efficient compression actually is in giving rise to the symptoms of apoplexy? Are we to consider with Mr. J. Hunter the hemorrhage capable of producing all the symptoms of apoplexy; or are we to suppose with M. Serres this hemorrhage to be merely an effect? We presume to think that the reasoning of Mr. Abernethy in many diseases applies strictly to apoplexy—the life of the part must have been originally affected, and we name the diseases from its most prominent phenomena. But M. Rochoux believes that a morbid change of the brain, recognisable by the senses, at least, very frequently precedes the hemorrhage; and this change most frequently consists in a softening of a portion of the cerebral substance. That precursory symptoms should not attend this affection, is not more wonderful than that tubercles of the lungs should often make great ravages, without disturbing the health or deranging materially any of the functions of the body. But of this *ramollisement* we shall speak more at length, when we take up the morbid changes of structure which accompany or are produced by hemorrhage into the brain.

Is there really then disease existing antecedent to effusion of blood in apoplexy? Is the hemorrhage merely an effect to be ranked with the other phenomena, effusion of serum, stertor, loss of sense and motion, &c.? We confess, notwithstanding

the authority of Mr. Rochoux, we should hesitate to answer this question either way; and yet do we not know, that in a state of health the blood vessels are capable of resisting all the force which their own action, and that of the heart united, can bring to bear upon them? Many causes capable of producing increased determination of the blood to the head, such as mental affections, pregnancy, epilepsy, and strong impressions of cold, are said to bring on apoplexy; and yet when we attend to the prolonged efforts which jugglers and others make upon their heads, and how some people will allow an anvil to be placed upon their chest, or upon the region of the stomach, and allow it to be struck upon by hammers, and all this without producing any rupture of the blood-vessels in the brain, we shall hesitate before we allow that causes which simply increase the blood's motion towards the head, can produce apoplexy without some previous morbid change in the brain itself. M. Rochoux mentions the case of an inhabitant of Gaudaloupe, who died apparently apoplectic during the act of coituss, whom he inspected, and found an effusion of blood on the surface of the brain, but the brain itself was perfectly sound. If it be true what Mr. Rochoux says, that such causes precede apoplexy, in not more than a fifth of the cases which occur, we have still stronger reason to believe that there is pre-existing disease, in which case the hemorrhage in all probability would have occurred sooner or later of itself. On the other hand, if we attend to the structure of the brain itself, a soft pulpy substance affording but little support to the coats of the blood vessels; a structure in short where it is conceivable that suddenly increased action, if in any part of the body, might tear the sides of the blood vessels or escape by the mouths of exhalants, opening in soft and yielding substance: if we attend to these facts, we shall at least be ready to grant that great facilities are afforded for hemorrhage taking place here, without the necessity of supposing that disease has rendered the vessels incapable of healthy resistance. The facts too of people dying of complaints not differing apparently from apoplexy, in whom no change of structure was detected, lessens the necessity for supposing a change of structure in the brain necessary for the production of the disease, and the total want of premonitory symptoms in so many cases; the occurrence in short of the disease in people in the enjoyment of the best health, notwithstanding the able reasoning of M. Rochoux, is not easily explained, upon the supposition that previous nervous, or any other nameless disorder existed. But upon these interesting points it is rather our wish to excite enquiry than to pronounce decisions, which, every one will be ready to admit, the facts on

either side hardly authorise us to draw. If we attend to the fact, that precursory symptoms may in many cases have been overlooked, from the inability of the patient in severe cases to answer as to the point; and if we suppose farther, that in other cases they may have been so slight as hardly to attract the notice of the patient or his friends, so little proportionate, in short, in point of severity, to the sudden and overpowering symptoms of the accession, as to be forgotten or disregarded, one cause of the obscurity regarding the existence of previous disorder would be removed. Another source of want of precision on this subject arises from the unskilful and slovenly mode in which the brain is but too often inspected. May not morbid changes have been overlooked, or not properly appreciated, in many cases of apoplexy, in which it is roundly asserted that no morbid appearance could be detected? Such cases are but few, and not many of them recorded by men upon whose accuracy and judgment we can implicitly rely. M. Rochoux is of opinion that hemorrhage in the brain is necessary to produce all the symptoms of apoplexy; and Mr. John Hunter tells us he never inspected a case of apoplexy or hemiplegia, except one, in which he did not meet with extravasations of blood, and that one died of a gouty affection *resembling* apoplexy. When tumours and abscesses are found, on inspecting apoplectic patients, it is clear that they are to be regarded merely in the light of predisposing causes. If the disorder is purely nervous in the first instance, some affection of the vitality of the part, it is conceivable that serum may be effused in some cases, and blood in others, or that they may be complicated; and it is still farther conceivable, that effusion of serum will more readily take place in debilitated subjects, effusion of blood in the robust. According to M. Rochoux, however, we are to consider these as constituting different diseases. He warns us also from supposing that slight causes can produce a true apoplexy; many having gone the length of attributing apoplexy to diseases within the abdomen, often exceedingly slight; and in this spirit, we find Weitbrectus, after having discovered three ounces of effused blood in the brain, and three or four small calculi in the gall bladder, seriously putting the question if these calculi could have caused the hemorrhage; and after having satisfied himself of the connection of these as cause and effect, affectedly declining to trace the connection very minutely!

The most prominent symptoms, and those most invariably present in a shock of apoplexy, may all be referred to obliteration, more or less complete, of the powers of sense and motion. The affection of the senses may vary from the slightest dulness,

to the most profound stupor. The paralysis, or loss of the power of motion, is not less variable in extent and degree, sometimes affecting only one organ, at others abolishing totally all power of voluntary motion. These two affections, M. Rochoux supposes to be characteristic of the sanguineous apoplexy, though we should suppose that they cannot be considered as being perfectly diagnostic, as there can be no doubt that they occur from numerous other cerebral affections besides hemorrhage.

The pulse is exceedingly variable, being sometimes strong, full and hard, from which we have to fear a continuation or return of the hemorrhage; in others it is small and feeble, indicating want of powers in the constitution to recover itself; but in most cases the pulse undergoes no material change. The state of the respiration has by many been conceived to be diagnostic of apoplexy; but M. Rochoux says it is quite as variable as the pulse, being, like it, often unaffected, though it is generally stertorous; but the degree of stertor is far from indicating either the severity of the complaint or the strength of the patient. Stertor too is often present in other morbid affections of the brain besides apoplexy.

The appearance and colour of the countenance were supposed at one time to be quite characteristic of serous and sanguineous apoplexy, but the whole profession now knows how little trust is to be reposed on these appearances. The countenance may be pale, or it may be red, pale green, yellow, livid, or of a deep violet; or it may be bloated, or the reverse. Independant of these, there is always a remarkable expression of stupor; and it is chiefly from an examination of the countenance that we ascertain the degree of this symptom. If the sphincter muscles of the bladder and rectum are paralysed, Sennert says that the prognosis is exceedingly bad. In severe cases the urine is always passed involuntarily. The mobility of the iris is almost always lost, except in very mild cases, in which the patients continue to see and to hear, but with some degree of confusion. According to Rochoux the pupil is as frequently found contracted as dilated, an observation which has been made by Dr. Cooke. When convulsions are present, Morgagni says, that they usually affect the side which is not paralysed.

To all these symptoms, except the loss of the powers of sense and motion, our author attaches no diagnostic importance; but these last, he says, are in a greater or less degree invariable consequences of rupture of a blood vessel in the brain. This statement is in contradiction to the experiments made upon animals by Serres; and still more of many recorded cases of

extravasation of blood being found in the brain, without having produced these symptoms. In some cases the disturbance of the senses is but slight, yet the subsequent paralysis, and more certainly inspection, when such cases have terminated fatally, proved that extravasation of blood existed. The disturbance of the intellectual powers is generally deep and prolonged. In those cases in which happily it is but slight, the patient nevertheless preserves an air of confusion and trouble, which wears off very slowly, unlike many other cases of much deeper affection of the intellectual faculties, without apoplexy, in which the patients recover the perfect use of their senses in a few hours, often in an instant. M. Rochoux considers this to be a point of great practical importance.

Valsalva first directed the attention of practitioners, particularly to paralysis, as a symptom of apoplexy. Rochoux has seen only one case in which one eye was affected; sometimes, however, both are affected; also the larynx, tongue, œsophagus, an arm, a leg, a whole half of the body; and in some desperate attacks, all the limbs together have suffered. When the larynx is affected, it is seldom that the patient ever recovers the use of voice: hurried and defective articulation is a common symptom, arising from paralysis of the whole, or of the half of the tongue. It is rarely that a single limb is paralysed; most frequently the leg and arm of the same side are affected, which, when the half of the face is also paralysed, forms hemiplegia, which sometimes is attended with an affection of the respiration, called *fumer la pipe;* the air, at each expiration, inflating the cheek, and being returned from the mouth, with the noise and in the mode which smokers sometimes employ. This symptom is regarded by many practitioners as an exceedingly fatal one. It is seldom that the leg is affected to the same degree with the arm; and its lost power is usually soonest restored. These paralytic symptoms, with perhaps the exception of that of the eyes, take place on the side of the body opposite to the one where the compression exists; and yet Lancisi and Morgagni, both adduce cases of paralysis occurring on the same side with the effusion, though Rochoux supposes either that these were not true cases of hemorrhage, or that some mistake has taken place either in observing or recording them.

But though paralysis is a very certain symptom of apoplexy, it is only when its accession is sudden and its duration protracted, that we can implicitly calculate upon it as a diagnostic symptom of hemorrhage. Without paralysis, however, M. Rochoux says, there can have been no effusion of blood into the brain. Paralysis may take place from other causes, though its

approach is then generally slow; but hemorrhage, according to M. Rochoux, cannot exist without producing paralysis as a symptom. The lesion upon which the hemorrhage depends, not being of a nature to be speedily repaired, we cannot hope for an early cure of the paralytic symptoms; and indeed, there are few instances of cure before two or three months. When complete resolution of all the members of the body has taken place, the same light is not thrown upon the nature of the disease as when the affection is more partial; because this general paralysis often arises from other severe comatose affections, besides hemorrhage: and because, in such cases, we cannot assure ourselves, that this complete loss of voluntary motion is not owing to some general collapse. This incertitude is increased, if the limbs present a tetanic rigidity, which sometimes, though rarely, accompanies their immobility in apoplexy. One might suppose, that when the paralysis is so universal, that they ought to meet with effusion in both sides of the brain; yet inspection proves that this is seldom the case, although the quantity of blood effused is always considerably greater. Apoplexy then, like many other diseases, is not so easily recognised when it is intense as when it is moderate.

Besides the hemorrhage, there is always engorgement of blood in the vessels and sinuses of the dura mater and pia mater, especially upon the side which is the seat of the effusion, and also of the vessels which penetrate into the substance of the brain. There is besides engorgement of the vessels of the scalp, neck, and breast, often real echymosis, the traces of which may even be met with in patients who have survived the attack fifteen or twenty days, shewing evidently that there has been determination of blood to the whole head; and that this determination is not limited to the period of the attack merely, but continues for an indefinite period—a circumstance to be attended to in practice. The appearance of the effused blood is different, according to the duration of the disease. If death has supervened early, at the end of three days for example, it is black and in soft clots; but in proportion as death has been more distant, the effused blood acquires more consistency, and loses partly its black colour. If, in consequence of stimulating treatment, or of determination of blood to the head, there is a renewal of the hemorrhage, the blood first effused is found of sufficient consistency, surrounded by beds of the more recently effused blood, in a soft or semi-fluid state.

At the end of a month or six weeks the blood acquires still greater consistency, resembling that which is found in aneurisms. At a period still more remote from the attack, it is found still

more solid, and of a pale red colour, approaching to yellow. In fine, it becomes entirely absorbed. Its quantity, in recent effusions, varies from a drachm or two; to four or six ounces—rarely more or less; and the severity of the symptoms almost constantly corresponds to the quantity of blood effused. A slight extravasation will occasion confusion of the senses only, without loss of consciousness; or it may produce blindness, palsy of the tongue, or lasting debility of one side of the body: in more considerable quantity it will occasion complete loss of sense with hemiplegia; and when still greater, the powers of sense and motion are completely abolished, and a speedy death usually ensues.

This effused blood is rarely met with except in the substance of the brain, where it is contained in cavities, which Wepfer and Morgagni have compared to aneurismal sacs, and these cavities not unusually communicate with the ventricles, or open by a rent upon the exterior of the brain. The walls of these cavities are very soft, strongly coloured red by the blood, of the thickness of a line or two, unequal, rough, and as if torn on their internal surfaces, and presenting many floating filaments when shaken in water. They are surrounded by a layer of cerebral substance of the thickness of two or three lines, of a pale yellow colour, soft, scarcely of more consistency than cream, and hardly misceable with water. The colour and softness of this cerebral layer diminish as it recedes from the apoplectic cavity, rendering it difficult often to determine the spot where the brain resumes its healthy appearances, and the morbid changes begin. Sometimes there is found, between the walls of the cavity and this external layer, another layer of a deeper yellow tint, also exceedingly soft, from two to four lines in thickness, and thickly beset with small bloody effusions not larger than pins' heads. If the blood has made its way to the surface of the brain externally, or to any point of the ventricles, it is usually mixed with portions of this yellow softened substance, which being retained by no obstacle, the blood carries along with it when effused. That side of the clots too, which lies upon the rent is mixed with portions of this softened substance. In these cases there is always a true loss of substance—a kind of erasion surrounded by a slight yellowish layer, which is soft and seldom thicker than the fourth of a line. This alteration of structure was first described by M. Rochoux, in 1814. He is at a loss to decide whether it takes place from the abode of the blood in the cavity, or precedes the hemorrhage, though he is inclined to the latter opinion; but to avoid all cause of discussion he calls this alteration of structure *concomitant softening* of the brain.

Such are the lesions of the brain in recent apoplexy; but they undergo afterwards very remarkable changes. The blood is after a time absorbed; the walls of the cavities cicatrize in some degree, or are slightly united by means of cellular and vascular bands which are circularly arranged, and between which is contained an ichorous liquid, reddish, more or less abundant, sometimes thick, yellowish, or gelatinous. These adhering walls are denser than the rest of the brain, of the thickness of a line or two, of a yellow or reddish tint, or sometimes of a rusty or deep brown colour. Sometimes they simply approach without being united by cellular or vascular adhesions, forming empty cavities. In one case dissected by M. Rochoux, the internal surface was as smooth as that of the ventricles, and moistened by a serous fluid. These cavities are constantly met with in apoplexy and the paralysis which succeeds to it, at whatever period of the disorder the patients may die, their number always corresponding to the number of attacks which the patient may have suffered.

Morgagni believed that hemorrhage of the brain occurred more frequently in the corpora striata and optic bed, than in all the other parts of the brain together. M. Rochoux gives us tabular views of forty-one cases, of which twenty-eight occurred in these situations. Hemorrhage appears to occur in both sides of the brain indifferently, although Morgagni has laboured to prove that the right side is more subject to it than the left.

The symptoms during life enable us to guess no nearer at the seat of the disorder than the side of the brain in which it may have taken place. Yet M. Serres, in a late publication, gives an account of cases of apoplexy in the cerebellum, which lead us to believe that apoplexy here is accompanied by an excited state of the genital organs. The facts however are as yet too scanty to enable us to draw any decided inference. M. Serres also believes that he can assign the part of the brain affected, which more particularly induces paralysis of the heart, lungs, and commencement of the intestinal canal. Such knowledge, even if attained, it is manifest, can be of little use to us in the treatment of the disease.

The most frequent complications with hemorrhage are softening of a portion of the cerebral substance, and effusion of serum, and one or other, or both of these affections may precede the effusion of blood, may be concomitant with it, or be found as its sequelæ. It appears that, by the French authors, this softening is attributed to slow chronic inflammation, and, if permitted to go on, ends in converting the affected portion of the brain into true pus. It is always found to exist along with an

injected state of the vessels of the whole brain, less apparent in the tunics, and remote from the softened portion. This injected state of the vessels may be present in every possible degree, and when producing great distention of the vessels is apt to end in extravasation of blood. But if sudden and concentrated congestion takes place in the brain a real apoplexy is produced, and the effused blood, tending to keep up an inflammatory state of the organ, is apt to produce what M. Rochoux calls consecutive softening of a portion of the brain. It is obvious that there is a strong analogy between this softening and hemorrhage—that they are liable to be brought on by the same causes, mutually to produce each other, to give rise to the same symptoms, and to terminate in the same changes of structure. By this view a strong connection is made out between inflammation of every kind within the skull, and extravasation of blood into the substance of the brain. As primitive and uncombined disorders, effusion of serum and softening, M. Rochoux says, may be readily distinguished from apoplexy; but when the diseases are in any way complicated together, the diagnosis becomes exceedingly uncertain. Considered as sequelæ of apoplexy, they do not render that disease more difficult of being distinguished; but to say which of the two it is, or whether there is only one or both occurring as sequelæ, we have no means of ascertaining. Effusion of serum, however, occurs in the great majority of cases, and is frequently free from complication with softening.

The softening, as an original complaint, manifests itself by a slow and comparatively gentle accession of its symptoms. It is apt, however, of a sudden to assume all the symptoms of apoplexy. More frequently the paralysis which it occasions, besides being slower in its approach, is accompanied by rigidity of the members, the muscles of the face are often spasmodically affected, the tongue is drawn towards the palsied side; but one chief means of distinguishing it from apoplexy, according to Rochoux, must be by an attentive consideration of the precursory symptoms. The mere existence of precursory symptoms is, in some degree, diagnostic of the presence of this morbid softening. In proportion as all these affections of the brain are more severe, the less are we able, from the symptoms, to distinguish one from another.

Exhalation of blood into the ventricles is described by Morgagni and Baglivi, as very much resembling the true apoplexy, being sudden in its attack, and rapid in its progress; the chief symptoms being paralysis and loss of sense. In the same way apoplexy may be simulated by strong effusions into the cavity

of the arachnoid externally. Exhalation of blood into the ventricles, M. Rouchoux describes as resembling acute hydrocephalus, with the exception of the fever, which is not present; and the hemorrhage from vascular rupture of the arachnoid coat externally, is rapid in its progress, and bearing a strong analogy to hemorrhage in the interior of the cerebellum, or tuber annulare. It appears to us that much of what M. Rochoux advances, with a view to establish a diagnosis between many affections of the brain, is of very little utility, and leaves the subject much in the same state in which it was found. Thus, he says, that exhalation of the blood into the ventricles is not to be distinguished from hemorrhage into the cerebellum or tuber annulare; but that hemorrhage into the substance of the brain, when not *excessive*, may be distinguished from either. We doubt if these and many other distinctions, which he attempts to establish, can be made out during the life of the patient; and we are pretty certain that though they could, they are of no consequence whatever but to amuse speculatists in their closets.

With regard to the influence of age and temperament as predisposing causes of apoplexy, M. Rochoux has been at the trouble to make out tabular views of sixty-three cases, illustrative of these circumstances. Judging from these, it appears that from the age of twenty till sixty, the predisposition rapidly increases; that it is greatest from sixty to seventy, gradually diminishing beyond that age. There are few cases of hemorrhage in the brain in children; Rochoux knows of no well authenticated case, except one which is recorded by Serres; but even with regard to this case, M. Serres does not say whether it was not the complaint which he calls meningeal apoplexy, and others arachnitis. Temperament and seasons, according to our author, exercise very little influence in causing apoplexy; though he is not disposed to deny altogether the authority of Hollerius and Baglivi with regard to the influence of particular seasons. M. Rochoux believes that there is no external sign, appreciable by the senses, which indicates a disposition to apoplexy; and he refers to the observation of M. Corvisart, to shew that individuals, of what are called the apoplectic make and temperament, are equally disposed to diseases of the heart. To hereditary disposition, our author is disposed to allow some share of influence, though he, at the same time, argues that this produces no particular form or temperament by which we can judge of the hereditary disposition.

Many authors have recommended the most absurd treatment in this complaint. Cœlius, for instance, says, that after having bled

the patient till he has slightly recovered, he is to be placed on his back in bed, and there *jolted about*; and we are gravely advised to intermit the jolting occasionally, to allow the patient to recover from the fatigue it may have occasioned him. This plan is more lately advised by Hollerius and Jacquinus; but Forestus recommends substituting in its stead ligatures round the limbs. Sennert advised a remedy, if possible still more ridiculous, namely, that of holding a red hot iron so near the head as to warm, but not to burn it. Ætius, however, thought it right to apply the iron and produce an eschar. Many other absurd, and even hurtful remedies have been employed, or at least recommended, most of which were of a stimulating nature; but few medical people, we believe, require now to be told that stimulants cannot fail to be injurious; and as to the practice recommended by some learned doctor of Germany, not very long ago, of trepanning the skull to get at the effused fluids, we presume to think he must be a rash surgeon indeed, who has the temerity to attempt any such fruitless operation. Emanuel Kœnig boasts of the surprising efficacy of a piece of executed criminal's bone, worn upon the paralytic limbs; which, however, is perhaps exceeded in absurdity by Nynam's remedy for palsy of the tongue, namely, three drops of blood drawn from the ear of a miller's ass, and given in a decoction of lentils!

M. Rochoux, we think very justly, criticises the mode of treatment which at present prevails in France. One, two, but never more than three small bleedings made at the foot, arm, or jugular, and leeches to the head or feet, are the first steps of the treatment. On the second day, an emetic or purgative is prescribed, and blisters are applied to the legs, thighs, and neck; afterwards stimulating and antispasmodic potions are prescribed, and occasional enemata to excite the action of the bowels. After some months, a course of mineral waters is recommended, and the paralytic limbs are treated with irritating liniments, electricity, and pumping water upon them.

If we attend to the injury which the brain has received, says M. Rochoux, and to the marked tendency to a continuation or recurrence of the hemorrhage, we shall see that many parts of the treatment commonly adopted are bad; and that our first indication ought to be to subdue the hemorrhage, the second to destroy the effort which tends to reproduce it, and the third to facilitate the absorption of the effused blood. If M. Rochoux were not so afraid of one decided and free bleeding at the outset, and of purgative remedies, his directions otherwise do not differ materially from those of Mr. J. Hunter. We think, that, for emptying the vessels of the head, bleeding from the temporal

artery, as recommended by Mr. Hunter, must possess a decided advantage over every other mode, in the estimation of any one who for a moment considers the distribution of the external carotid; and next to this, bleeding from the jugular vein. The injury which the brain has sustained from rupture of its vessels and laceration of its substance, must, on the recurrence of reaction, have a strong tendency to produce violent inflammation; and accordingly Rochoux remarks that the blood of the second, and still more that of the third bleeding presents the inflammatory coat. The patient ought always to be placed in a position with the head raised: we are apt to neglect this, on the supposition that the living body is little subject to the laws of physics. Having bled, according to Mr. Hunter, till the patient shews signs of recovery, we are to continue the flow of blood till he becomes faint; we are to give saline purgatives freely, to diminish impetus and promote absorption, we are to enjoin absolute rest, low diet; and to advise the patient to avoid coughing or sneezing; and never at any time are we to attempt to rouse, by stimulating treatment, the torpid members to action. Emetics, so freely used by many French practitioners, receive the unqualified reprobation of M. Rochoux; and indeed it is most unreasonable to subject to the violent action of vomiting, a man who has received a laceration of his brain. Speaking of the use of stimulants, Mr. Hunter says, we might with "equal propriety stimulate the fingers when their muscles were torn to pieces." A second hemorrhage, is often, says Rochoux, produced about the tenth or eleventh day, by the then more free employment of stimulants. In vain, he adds, do we stimulate; in vain do we tear the paralytic members; while the cause which deprived them of their nervous power remains, it is impossible their motions can be restored. In short M. Rochoux recommends a strict antiphlogistic treatment; he has hardly any faith whatever in stimulants at any period of the disorder, but he strongly recommends those who will use them, to defer their use to a very late period of the complaint.

Many drugs, chiefly aromatics and stimulants, have been absurdly supposed to act as preventatives against apoplexy; and Camearius recommends an amulet of coral to be worn; and adds, "long experience has convinced me of the efficacy of mace chewed fasting, twice a week, with a little argaric, in preventing apoplexy! M. Portal even gives a long list of remedies, which he says he has seen do much good in this way; but it is clear that in whichever way these remedies might act, they could not possibly have any such effect upon the patient. We think we cannot do better than conclude by quoting the

opinions of Abernethy. "We should pay attention, that the stomach digest throroughly all the food that is put in it, that the residue be daily evacuated, that exercise should be taken in the open air short of fatigue; for without these we seek in vain for cures, or even preservation among medicines, and we but deceive ourselves by trusting to them.

Riberi on Contagious Gangrene and Erysipelas *.

The author of this Treatise was induced to publish on the subject, by having seen this gangrene prevailing for nearly three years in the Hospital of San Giovanni, at Turin. The disease began to shew itself in the summer of 1817, gradually diminishing, and disappearing about the middle of 1820, when the number of patients and additional beds, whence perhaps it had partly originated, were lessened. It ceased during the spring of the years 1819, and 1820. The intervals, at other times, were not above 25 days. Not more than three or four individuals were ever affected at one time. It was only communicated in cases of solution of continuity penetrating beyond the cutis. It did not affect natural surfaces or slight abrasions. The parts once affected had no immunity from a second attack.

According to the author the stage of delitescence or incipient stage, may last from 20 hours to the 7th day, or even longer. The part affected is at first pale, tumid, rather hot, and painful, and discharges either serum or true pus; afterwards the part appears corroded, and presents a pale ash-coloured depression; the edges being irritable, painful, hard, of a dull red, and they easily bleed. These appearances increase until the gangrene has extended to the whole ulcer; there is then an inflamed zone in the circumference, and the surface of the ulcer is covered with a dull white, pulpy, pseudo-membranous layer, which sometimes appears without any preceding excavation. This layer, which is sometimes streaked with blood, is formed of the disorganized mortified structures; it is removed with difficulty, and not without great pain. The

* Sulla Cangrena contagiosa o nosocomiale; con alceni Cenni sopra una Resipela contagiosa. Del Dottore A. Riberi, Membro del Collegio Chirurgico di Torino, &c. &c. &c. Torino, 1821, 8vo.

matter discharged from it is sometimes brownish-grey, dense, and viscid ; at others, serous and reddish.

The SYMPTOMS increasing, œdema, with a degree of inflammation, appears in the vicinity. Red lines extend from the affected parts to the nearest absorbent glands, which become tumid and painful. If the contagion was introduced at two or more points the progress of the disease is to connect them, unless they are very distant. Sometimes only a part of an ulcer is infected, the rest being red and tending to heal. The form of the gangrenous ulcer is generally round. If the ulcer leads to a cavity, the gangrene extends there, and the integuments are destroyed at many points, every opening being connected with the first. In weak scorbutic subjects, blood oozes from the capillaries, which reddens the matter, and makes it more fluid, unless indeed it should form coagula. In such cases, the gangrene is most rapid, and cannot be checked ; the author observed but three such cases. Independent of this complication a small vessel may be laid open, and cause a sudden and serious hemorrhage.

In some cases, the disease becomes stationary for a time without any evident cause, and either disappears or resumes its course. This gangrene is either pulpy or ulcerous. The latter form was seen only once by the author. It is the most benignant form of it, and is relieved by gentle measures. It sometimes appeared combined with the first, its own characters however prevailing, the disease begins with the symptoms, sometimes of the one, sometimes of the other. The cellular tissue seems to be the chief SEAT of this gangrene. The integuments present more resistance than the subjacent parts ; this is the case also with the absorbent glands, but less so with the blood-vessels, on account of their cellular covering. The parts most readily affected by this disease are those in which the cellular tissue is most lax. The contagion is not communicable to every wound, but most easily to those in which the granulations are most luxuriant. A general reaction often shews itself consecutive to the local lesion, and is uncertain in its duration and complication, according to the age, the sex, and the part affected.

The CONTAGIOUS nature of this disease is indisputably proved by numerous inoculations as well intentional as accidental, as the author experienced on himself. These experiments are supported by many arguments, particularly its sudden developement in ulcers, and the slowness with which it proceeds in healthy subjects. The best English writers, whom we have consulted on the subject, are decidedly of a similar opinion,

but MM. Percy and Laurent, adopt an opposite opinion. *(Dictionnaire des Sciences Med.* ARTICLE, *Pourriture d'Hospital.)* They consider it as an epidemic and connected with disorder of the organs of digestion. Both these opinions seem to be partly true, though we should not adopt either of them exclusively. That hospital gangrene is contagious even a limited experience has enabled us to observe; at the same time it is clear that it occasionally originates independently of contagion, though, when it has once arisen, it may be propagated in that manner. We have seen an individual case occur in a small and well regulated hospital, without having existed previously, as far as could be ascertained. In another well regulated and airy hospital of considerable extent, we have seen it attack almost every patient on whom an operation of any extent was performed, particularly in amputation cases, and in scrofulous and debilitated subjects. This occurred in summer. The same seems to have been the case in the disease which the author has described. He attributes its origin to the union of too many patients, want of cleanliness, and proper ventilation. The predisposing causes are atonic, scorbutic, scrofulous, psoric, venereal, ulcers, large lacerated wounds, and particularly those of the extremities. Generally speaking, recent wounds are not readily affected. A moist warm atmosphere promotes the action of the contagion; hence the disease disappeared in winter: if this was not the case in the practice of others, the author attributed it to the smallness, and crowded state, &c. of the wards of their hospitals. We perceive that MM. Percy and Laurent, on the contrary, state, that they have observed this gangrene appear about October and cease in April: hence they consider a cold dry atmosphere as a predisposing cause.

The author considers the contagion to act by exciting a local inflammation of a peculiar nature, and subsequently a general disturbance resulting from the diffusion of the diseased action through the medium of the nerves. The contagious matter is not, he thinks, absorbed, and having no affinity with the organism (which, however we pretend not to understand), excites much local, and but little general injury. Such is the explanation which our author gives. How far it is rational or intelligible, we shall leave our readers to judge. This contagion may be introduced in various ways. The most common is by the use of instruments, which have not been cleaned after the dressing of gangrenous ulcers. The air is not a medium of transmission; the contagious vapours exhaling from the ulcers may assist in the formation of a new stock of contagion, but cannot of itself communicate the disease.

The TREATMENT must be principally local; the general, has only a secondary effect. Caustics may be tried in the first place. The nitric acid is most useful, repeated if necessary, care being taken to destroy every point; and diluted muriatic acid being employed in the subsequent dressings. He considers the hot iron as perhaps preferable to all; and in this opinion, though somewhat contrary to English notions, we coincide; for we believe, that were it not for the prejudices on this subject, the pain which it causes is trifling in comparison with that experienced from nitric acid and other caustics. Amputation may be performed, but is seldom necessary; and in some cases which we have seen was not successful. If a relapse should occur in the stump, it is generally the result of a new inoculation, or possibly a spontaneous developement of the disease; and the patient usually sinks. Among the applications, the best are emollients and anodynes, as hyoscyamus, cicuta, and opium; oils are injurious. The mineral acids are useful when the disease is mild, or when its nature is doubtful. The turnip or carrot poultice sometimes checks the disease, and always proves anodyne. We should trust more to wine given in small quantities, and frequently, than to any other method of treatment.

The CONTAGIOUS ERYSIPELAS appeared during the time that the hospital was free from the gangrene, and gave way when it recurred. It was generally of long duration, readily affected solutions of continuity arising from other causes, surrounded a considerable part of the body, attacked the head in preference to other parts, and yielded to the treatment indicated in such cases. The author considered it contagious, and the circumstances appear to authorize him in the opinion. These were its appearances when the disease was least frequent; its regular diffusion from one patient to another; its tardy propagation to patients at the opposite side of the best ventilated ward; its having attacked one woman, and subsequently another who had assisted her; and the previous tumefaction of the glands when the disease was about to appear in any other part. This form of disease we have ourselves also seen. It differed very materially from the contagious gangrene, in attacking the robust in preference to the feeble, fresh wounds rather than ulcers, and small rather than large solutions of continuity. In one hospital, we once observed it attack almost every second patient who was let blood—and almost every individual who was bled from the temporal artery. Speaking of metastases, he supposes they are effected by the nervous system; but, as this is a subject of secondary importance, we shall not dwell upon it.

Although the TREATMENT should correspond to the inflam-

matory nature of the disease, yet the author condemns the imprudent use of blood-letting, and relates cases in which it destroyed the patient. If the disease should not manifest itself externally, with symptoms of internal lesion, he recommends the use of moderate diaphoretics, warm applications, frictions and local irritations of the cutis: he confesses however, that notwithstanding these and other means, he was too often unsuccessful in his attempts to obviate the bad effects of internal metastases.

M. Ducamp on Strictures and Retention of Urine *.

The expulsion of the urine from the bladder is prevented or retarded from two causes,—paralysis of the bladder, or obstruction, more or less complete, of the urethra. Fungus at the neck of the bladder, enlargement of the prostate, or varicose vessels may produce this obstruction, though in more than nine-tenths of the cases it arises from a stricture existing in one or more points of the urethra. Strictures occur from inflammatory or other diseased processes in the œsophagus or rectum; but they are infinitely more frequent in the urethra, from its liability to be affected with gonorrhœa, which is generally acknowledged to be the most frequent cause of stricture. Some individuals have great irritability of the urethra; they are easily affected with gonorrhœa, which is difficult and tedious to cure; slow inflammatory action succeeds to the more acute, and becomes habitual to the canal, with pain and itching along its course; the stream of urine becomes small, forked, or otherwise irregular; and if a bougie is introduced in this state of the urethra, it occasions great pain at some particular point, through which it is passed with difficulty, if at all; and when withdrawn its point is charged with a little mucus or blood. This painful point, says Ducamp, is the seat of a chronic inflammation and commencing stricture. The parts are yet in the state which, by the English surgeons, is called *dilatable stricture*.

This chronic inflammation, in process of time, comes to change the nature of the parts, to increase their sensibility, to

* Traité des Rétentions d'Urine causées par le Rétrécissement de l'Urètre et des moyens à l'aide desquells on peut detruire complétement les obstructions de ce Canal, Par Theodore Ducamp Docteur de la Faculté de Médecine de Paris, Membre de la Société de Medecine de la même ville, et de plusienrs Sociétés savantes. Avec cinque planches. Précédé d'un Rapport fait à l'Institut. A Paris 1822, 8vo.

augment their bulk, to produce swelling, hardening, morbid growths, adhesions, and ulcerations of greater or less extent. Parts long subject to moderate irritation have first of all an afflux of fluids to their vessels; they swell, lose their softness and elasticity, and pass into the state known by the term *induration*. The parts which possess little sensibility or irritability are most subject to be indurated, as the glands and cellular tissue, but the sensible and irritable tissues of the skin and mucous membranes, also pass not unfrequently into this state, as in elephantiasis, some species of laryngeal phthisis, schirrus of the pylorus, and the urethra, which becomes contracted, and obstructs the flow of the urine. But besides the mucous membrane, the surrounding cellular tissue and spongy bodies become indurated and contracted, and press upon the canal. In general these contracted indurated points are not more than a line or two in extent, though often there are several in the same subject with sound parts intervening. It is of importance to remember that these parts are more resisting than the rest of the canal, and require greater force to rupture them, or cause them to yield. In some cases the canal is rendered tortuous by irregular adhesions and indurations; and both J. Hunter and Ch. Bell relate cases in which the induration, instead of being bounded to the extent of a line or two, extended for one, two, or even three inches. The urethra is sometimes divided into two parts, by what M. Ducamp calls bridles, thick whitish membranes, generally less resisting than the sound part of the canal, and which leave an opening above and an other below, or one on either side. There is seldom more than one or two of these membranes, though sometimes four or five; occasionally they arise from a thick vascular base, which projects into the tract of the urethra, and which appears evidently to be a thickening of the mucous membrane from repeated inflammations. By some authors they are supposed to be the cicatrices of preceding ulcers, and the discharge which precedes them is thought to prove the opinion; but we know that ulcers hardly ever exist in the urethra; and moreover it agrees better with the present state of pathology to consider these bridles as adhesions, and false membranes produced by inflammation. It is conceivable that when obstruction takes place, the urine will irritate and produce even acute inflammation of the strictured part; the consequence of which may be the secretion of a fluid capable of being organised. We meet with false membranous adhesions, not only in the urethra but in the blood vessels, where we might suppose that the continued current of the blood might hinder the processes which produce them.

The older surgeons supposed that STRICTURE frequently arose from fungus or fleshy growths; but the pathological researches of Morgagni, Hunter, and others, prove that these are rare, and rather arising consequent to stricture, than giving birth to it. Strictures, according to Mr. Hunter, are situated most frequently in the membranous part of the urethra. To ascertain this point with precision, Ducamp uses graduated instruments, which are divided into inches, half inches, lines, and so on, which at once point out the distance from the orifice of the urethra to the stricture. In five cases out of six, he found the obstruction at the depth of from four and a half to five and a half inches; and in the majority of these it existed between four inches and nine lines, and five inches and three lines from the orifice. Mr. Ch. Bell mentions a case where stricture at the glans caused ulcerations and abscesses in the perineum. Twice only has Ducamp met with stricture at the depth of two inches, but the impediment was slight, and admitted the passage of a pretty large sound.

But whatever the nature and seat of the STRICTURE may be, it produces nearly the same effects, only varied in some degree by the size of the opening which is left, and the duration of the malady. The urine is made frequently, and with pains in the perineum, and smarting and itching in the canal; the stream progressively diminishes in size and force, and is bifurcated, twisted, or irregular; the patient's sleep is disturbed during the night by frequent calls to void his urine; he cannot empty the bladder completely; and if the urine is retained any length of time, he has pain over the pubis and a dragging sensation in the groins; the bladder forms a painful tumour in the hypogastrium; and in this state the least excess or fatigue is apt to produce complete retention. In some individuals the difficulty is so great, that the urine, instead of being propelled from the urethra, falls perpendicularly between the patient's legs, or perhaps issues drop by drop; in which state the bladder becomes fatigued before its contents are half expelled, so that an almost perpetual desire to make water exists. Between this pressing desire and the dread of satisfying it, the patient is kept in misery; when he attempts to pass his urine, his limbs tremble, his face becomes flushed, and the fæces often issue at the same instant, obliging the patient to make water in the same posture he goes to stool. M. Ducamp details the case of a merchant who was reduced to this wretched condition, and in whom the violent straining produced a large inguinal hernia; and he has met with others who had stricture of the rectum from the same cause.

INCONTINENCE OF URINE is a frequent effect of stricture. It may arise from two causes. In the first, and most frequent, the urine not finding a ready passage across the stricture, dilates the urethra beyond it, and when the expulsive efforts cease, a part of the urine lodges in this spot, and in a short time flows drop by drop, and by its own weight, through the stricture. In the other case, the incontinence depends on so complete an obstruction of the canal, that the bladder being perpetually in a distended state, the urine is no longer confined by the sphincter, (which becomes enfeebled from continued action,) but by the stricture, beyond which the urethra becomes dilated; so that when the patient coughs, walks, or in any other way excites the action of the abdominal muscles, the urine is forced out in greater or less abundance. In this state of the urethra the patient is in perpetual danger of complete retention. The stricture, being kept in a constant state of irritation from the pressure of the urine, inflames and swells rapidly, and pours out a thick tenacious matter, which accumulating upon the inflamed point, is apt to produce complete obstruction of the canal. If an attempt is made to introduce the catheter in this state, it is always brought away with its beak loaded with this matter. The situation of the patient is now critical in the extreme. The perpetual desire to pass the urine is accompanied with acute pains; the bladder hard, distended and painful, is found stretching high up in the abdomen, and the whole belly is tender to the touch, violent fever supervenes, the skin is hot, the pulse hard and quick, the face flushed and excited; and if this state of pain and agitation is of long duration the patient becomes delirious. The urine thus accumulated behind the stricture is dammed back, not only into the urethra and bladder, but also into the ureters and kidneys, irritating and inflaming all these sensible parts; and communicating the inflammation sometimes even to the peritoneum and intestines. If the patient is not now relieved by art, the inflammation—becoming most acute where the distention and irrition are greatest, (that is, in the urethra behind the obstacle) produces rupture or mortification of the walls of the urethra at this spot, and the urine is effused into the cellular substance of the perineum, scrotum, and neighbouring parts; sometimes the bladder itself giving way, when it gets into the cavity of the peritoneum, and death inevitably follows. In some cases nature makes a strong effort to relieve the oppressed state of the urinary organs. The absorbing system is set to work; more or less of the urine is taken up, and passes off in profuse perspirations, of a distinctly urinous smell, by which the sufferings of the patient are for a time greatly relieved.

The passage of the urine is not the only function of the urethra which suffers from stricture; the EJECTION OF THE SEMELA is rendered more or less imperfect. Often the semen is detained beyond the stricture, and then flows out when the excitement has worn off. A venereal pain is occasionally felt during the act, and instead of semen, some drops of blood are ejected from the rupture of some of the vessels which branch upon the inflamed point. Coitus always increases the difficulty of making water, from the irritation and consequent inflammation which it occasions. Hence, those affected with stricture have usually increased discharge after this act, so much so, that they often believe they have contracted a new gonorrhœa.

Sir Everard Home relates the case of an old man, who had connection with his servant maid, whom he believed to be sound, and the next morning he had all the symptoms of gonorrhœa, of which he was cured in eight days; but again repeating the same trespass, he was visited by the same punishment, and on consulting Sir Everard, it was found that he had stricture of the urethra. This discharge, however, differs from real gonorrhœa; it appears immediately after the act, and without much pain or inflammation; in twenty-four hours it attains its greatest degree of intensity; it remains stationary for a day or two, and then gradually disappears.

Although stricture is in all probability a purely local disease, yet it soon disturbs the GENERAL HEALTH; the digestion gets bad, and the patient usually becomes exceedingly irritable. But the most remarkable of the constitutional phenomena which it manifests are the febrile accessions, which are more or less complete, and return at indeterminate periods. The rigors are often as violent, and the succeeding heat, and even delirium, as intense as in the fit of a regular tertian; and like it the fit terminates in a profuse sweat. It is remarkable, that during these accessions, there is no increase of the irritation in the urethra, or of redness at the meatus; there is no swelling about the parts, or increased difficulty of voiding the urine. The intervals between these fits are usually irregular, and often at the distance of two or three months, though they are sometimes so regular as to be mistaken for ague. Sir Everard Home relates the case of a man, to whom the bark was administered during a period of three years; but these accessions were not cured till the stricture was destroyed.

One of the most frequent effects of stricture is to produce DILATATION of the URETHRA beyond it, by the pressure of the urine upon the part. Chopart mentions a case where this dilatation caused a tumour in the perineum as large as a hen's egg, which

was increased when the patient made water. This dilated portion becomes the seat of habitual inflammation; the patient has constant discharge, with pain in the perineum, tenderness to pressure, and itching along the urethra. When patients die of retention, this inflammation is shewn by the injected state of the part; the mucous membrane is found thickened and covered with a layer of muco-purulent matter, more or less tenacious. In severe cases, sudden inflammation and gangrene are produced. When ulceration takes place behind the stricture, a portion of the canal may be perforated, or so much thinned and weakened by distention, that it is ruptured, and the urine is infiltrated into the loose cellular substance of the neighbouring parts. The scrotum is then distended, sometimes to the size of a child's head; the perineum and penis are distended beyond measure; and the infiltration makes its way into the groins, the inferior part of the abdomen, and the tops of the thighs. All these parts become violently inflamed, and speedily pass from a red to a violet or livid colour, the parts slough or are detached, a fœtid matter mixed with urine is discharged, carrying with it fragments of skin and mortified cellular substance; and a vast ulcer occupies the whole bed of the infiltrated urine. "Raw surgeons," says Desault, "who, perhaps, behold unmoved all this mischief going on, are now terrified at the extensive ulceration which is left by the separated eschars. The whole scrotum, integuments of the penis, groins, perineum, upper part of the thighs and pubis are rotted away, and nothing is seen, but the naked testicles suspended by the spermatic cords, floating in the midst of an enormous ulcer."

When INFILTRATION occurs, no time should be lost in making free openings to allow the urine to issue; the patient's safety in great measure depends on this; if he survives, the fever abates, the ulcer closes, granulations spring up, and the gap is gradually closed, except one or more openings, which communicate with the urethra behind the stricture, forming what is technically called urinary fistula. These fistulas are ordinarily sinuous, unequal, and so narrow at some points, that the urine does not flow freely through them; new effusions and new abscesses are the result; the neighbouring parts become more and more disorganized; the tendinous and aponeurotic parts are exposed; and even the very bones, in some cases, become carious, to the great danger of the patient.

A butcher, aged forty-six, of a strong constitution, after repeated attacks of gonorrhœa, experienced difficulty in making water, which was aggravated by every excess: at last complete retention took place, for which he was bled, had the bath, and

emollients without avail. The patient would not consent that a catheter should be thrust into his bladder, so a bougie was introduced, which, however, did not pass the obstacle, but was allowed to remain, by which the irritation of the urethra was augmented, and the issue of not one drop of urine was procured. He was bled afresh, but without benefit, and numerous leeches were applied to the perineum with slight relief. Soon after the pains were renewed with greater violence than before; the desire to make water on the part of the patient became more and more pressing, but all his attempts were fruitless. His surgeon then endeavoured to pass a sound, but ineffectually. MM. Louis and Chopart were called. "All our attempts to reach the bladder with different instruments," says Chopart, "were as unavailing as those of the ordinary surgeon; there was an obstacle beyond the bulb, which appeared insurmountable; yet the prostate was not enlarged, and there was no tumour in the perineum. A discharge of blood took place after every attempt that was made to sound, as well as after those which had been made before. As the circumstances of the case were urgent, and the bladder formed a very tense tumour in the hypogastrium, it was proposed to puncture the bladder above the pubis. But the patient would not consent, and the same evening the urethra burst; or rather had been torn by the attempts to pass the sound, and the urine was infiltrated into all the adjacent parts." The scrotum, penis, and groins swelled up prodigiously; the patient had convulsions and delirium. Next day the pulse was small and intermittent; the scrotum the size of an adult's head, the upper part of the thighs œdematous, a black and livid patch already occupied the perineum. A large incision was made; and the parts disgorged themselves, the pulse rose, the eschars were detached, leaving exposed, the prostate, a large portion of the urethras and the tunica vaginales of the testes. In a few days the swelling of the penis had diminished so much that a sound could be introduced into the urethra, and its beak came out in the midst of the perineum, more than an inch distant from the opening which gave vent to the urine; with more difficulty the instrument was introduced into the bladder, where it was allowed to remain; but it did not hinder the urine from passing, in part, by the rent. At the end of three months all that remained was a fistulous opening in the perineum; the patient wore a sound for a month longer, and had afterwards bougies introduced without success. Some months afterwards, a urinary abscess, formed in the right buttock, burst, and left a fistulous opening. Another soon appeared, and had the same termination; new difficulties to the issue of the urine arose;

continued and severe fever supervened, with tension of the abdomen, hiccup, and delirium, which put a period to the protracted and severe suffering of this patient.

Stricture in the urethra also produces ABSCESSES in the PERINEUM in the same way that irritation and inflammation in the anus, occasion collections of matter exterior to the walls of the rectum. The matter generally points externally, and ought to be evacuated, though it sometimes also bursts into the urethra, forming a sinuous opening by which the urine may infiltrate the cellular tissue all round. Even these fistulas are difficult to cure, from the tortuous track which they follow; frequently giving rise to new collections of matter.

Another consequence of stricture is SWELLED TESTICLE, which our author attributes to inflammation, extending from the part behind the stricture along the vesiculæ seminales and vas deferens. Sir Everard Home attributes the hydrocele, in some cases which came under his observation, to stricture of the urethra; the fluid disappearing from the use of no other means than what were directed against the stricture.

It is well ascertained that patients with stricture seldom are able to empty the bladder completely; for if the expulsatory efforts be renewed immediately after having made water, the urine will again issue from the penis. This circumstance appears to have excited the curiosity of our author. He argues that it does not depend upon the urethra, because the canal which gives passage to one fourth of the liquid in the bladder is able in time to give passage to the other three fourths; it must therefore, says he, depend upon the bladder. But perhaps this reasoning is not quite sound; for we might as well say, that the expulsatory power of the bladder and assistant muscles, being capable to expel one fourth of the urine, ought, if continued a due length of time, to be able to expel the other three fourths. Mr. Hunter has also directed his powerful mind to this subject, and he observes that the bladder is sometimes so exceedingly irritable in cases of stricture, that it not only does not cease acting till the whole urine is evacuated, but continues to strain after there is nothing to throw out, its own action becoming a source of irritation. M. Ducamp, however, has tried an experiment to decide this point. He applied pressure, so as to produce the same effect upon the canal which a stricture would do, and then attempted to pass his urine in a small stream. Severe pains were felt along the canal, the desire to make water became more lively, and the efforts to expel it more considerable; in fine the pains became so excessive, that he felt as if the sides of the urethra had given way;

but in a short time the pains were severe only at intervals till they gradually diminished, and the desire to pass urine ceased, although he was certain he had not passed a half of that which he ordinarily did at a time. There remained considerable pain in the urethra. In a few instants afterwards, wishing to ascertain if the bladder was quite empty, he again attempted to make water, and passed nearly as much as he had done during the experiment. We think it is clear that the actions of the bladder, being in a great measure voluntary, cannot continue indefinitely, and that therefore in stricture from being prolonged, the irritability of the bladder is exhausted, and requires rest for its restoration. The same is true, says our author, with regard to all the muscles, although habit sometimes renders them capable of exertions much more prolonged.

The bladder then of persons labouring under stricture being kept almost constantly in a state of distention, much irritation is kept up, which is farther increased by the acrimony which the urine acquires by being long retained. Inflammation of the internal membrane soon succeeds, and abundance of viscid matter is poured out which renders the urine flocculent and muddy, and often gives rise to complete obstruction. This matter collects in the bladder itself, putrifies, irritates more and more the already too susceptible organ, and acquires an infected odour. The sufferings of a patient in this state are almost past description. He is rendered alike incapable of business and pleasure, he cannot go into society, his sleep is broken in the most distressing manner, and the slightest errors in diet and regimen threaten to produce complete retention. At other times, things take a different and yet more unmanageable course; ulceration takes place in the bladder, perforates its walls, forming a passage to the urine, which distends the cellular tissue of the pelvis; gets under the peritoneum, and sometimes even perforates it and gets into the cavity of the abdomen; swells up the perineum, scrotum, &c., producing every where inflammation, suppuration, gangrene, and generally ending in the death of the patient. If confined to the lower pelvis and external parts the infiltration may not be fatal, but a fistulous communication is established with the bladder, through which the urine is perpetually distilled as it is secreted; the patient is rendered much more miserable than with fistula into the urethra, because he can then retain his urine, but when the opening communicates with the bladder this is impossible.

Catarrh or INFLAMMATION of the BLADDER, produced by stricture, is more or less difficult to cure according to the age of the patient. If the bladder preserves its natural size, by destroying

the stricture we restore the patient to health, although the urine be glairy and ammoniacal. But if, on the other hand, the tumour which the distended bladder forms cannot be felt above the pubis, if the patient can contain but little urine, and if his age be more than sixty, to destroy the obstacle will not completely cure the patient. His urine will be made easily, but little at a time, because the bladder contracted, thickened, and disorganised by inflammation, cannot hold a large quantity. Along with this inflammation is usually joined enlargement of the prostate, which is also difficult of cure in old subjects, especially when it has been the seat of abscess, or has become fungous or otherwise changed in texture, which it frequently is in old men. In young subjects, on the contrary, when the gland though considerably enlarged is not altered in structure, it usually, returns to the condition of health on destroying the stricture.

When the bladder has been long and greatly distended, the URETERS are distended, also sometimes to the size of a small intestine. It is to the irritation and inflammation thus produced in the ureters, and even extending to the kidneys themselves, that we are to attribute the severe pains and sense of dragging which patients, affected with retention, experience in the loins. These symptoms yield when the urine is evacuated. Sir Everard Home relates the case of a man, aged forty-three, who had pain in the region of the left kidney, which at times was exceedingly severe, especially on attempting to make water. The fits of pain were calmed by taking opium to the extent of five grains, which was increased to fifteen, in the day. The stricture, however, being discovered and cured, the patient was no longer subject to the pain. Calculi in the urinary passages form a troublesome complication with stricture; for however small the calculi may be they seldom can pass the stricture. Some interesting cases of this kind are selected by Sir Everard Home; one of an old man who had a large calculus in the bladder, and twenty smaller lodged in the membranous portion of the urethra, which was distended into a large pouch bounded by the stricture in front; and another case in which the stricture being destroyed by caustic, two pretty large calculi issued, and the patient obtained immediate relief. The calculus is brought by the urine against the opening in the stricture, which it closes, more or less completely, producing obstinate and often fatal retention.

We do not think it necessary to enter at length into the consideration of all the various modes of cure, proposed in strictures of the urethra, by dilatation, and by caustic, and which are detailed at great length by M. Ducamp, and their advantages and defects

clearly and satisfactorily pointed out. He prefers plastic BOUGIES to all others, especially in the early treatment of stricture, when they are required to be used small. When of a large size they become rough if we attempt to bend them, and when large they must be bent to pass. The heat of the parts, however, soon softens these bougies, so that the slightest obstacle arrests them, and Chopart mentions a case where he thought he had freed the stricture, but was much surprised some hours after to observe both extremities of the bougie projecting at the meatus. Our author is not favourable to the treatment by bougies, because it is uncertain, often impracticable; besides it is tedious and painful, and the cure when attained is merely palliative. We believe most intelligent surgeons will agree that these objections are well-founded. The introduction of a bougie often produces lively pains, rigors, and syncope, and, in irritable individuals, the instrument for many days, even weeks, cannot be retained above a few minutes, though usually the canal is soon reconciled to the stimulus of this foreign body, so that even in the first days of the treatment the instrument may be allowed to remain half an hour or an hour. They often occasion high inflammation of the mucous membrane, profuse discharge, ardor urinæ, and fever, requiring strict antiphlogistic treatment. The irritation may extend to the testicles, and swelling and inflammation be the consequences. Buboes also may arise in irritable individuals from the use of bougies, and even abscesses form in the perineum, and very fatal consequences be the result. Besides, these bougies must frequently be persevered in for a period of three, six, or nine months, and after all, we can never succeed in rendering the strictured part of the canal of its natural size, since the parts usually strictured are naturally much wider than the meatus urinarius, and a bougie larger than that, cannot be passed.

Hollow ELASTIC GUM BOUGIES are sometimes used by our author, who contrives to give them additional firmness by means of a small stilet of lead or other ductile metal. The usual way in which he fixes them is by means of a thread; the two ends of which are brought down the sides of the penis, and a ring of elastic gum slid over all; the ends of the thread are then brought back and made fast to the extremity of the bougie.

Of the various kinds of SOUNDS, and the modes of using them, it is unnecessary to say much. In some cases, the introduction of a bougie by the ordinary mode is impossible, consequently we can do nothing in the way of curing by dilatation. The structure may not be complete, and yet the patient requires that some means be taken for his relief. "In France," says M.

Ducamp, "we pass a conical sound with considerable force into the bladder; in England where there is a just dread of the *cathétérism forcé*, the stricture is destroyed by caustic." "Surgeons" he continues, "who are ambitious of the title *of operators*, despise the slow progress and minute attention which the bougies require; nothing but what is prompt, great, and striking is agreeable to their taste; they thrust a silver catheter through every obstacle into the bladder: at the end of three or four days they exchange it for one of elastic gum, this last they withdraw every eighth or tenth day, and this they call practising good surgery on a grand scale!" The result is, in general, that a false passage is established; and inflammation of the urethra and prostate are produced by the presence of the instrument.

The directions given by French surgeons to perform this operation are treated by our author in a happy vein of irony. "Most commonly," say they, "we must use considerable force to overcome the obstacles in the urethra, we must therefore use a very solid sound, and of a small size. If, in spite of its smallness, and with the use of gentle force, it cannot be made to pass, we must spin it round upon its axis like a gimlet, and attempt to make a way by boring. If this fail, we are to apply the palm of the hand to the hilt of the instrument, and force it in the direction of the axis of the canal, which, if we do, we cannot wander from the canal, or make a false passage. But as English surgeons do not relish this operation, it is unnecessary to advance all the reasons which Ducamp ably brings forward to bring it into disrepute in France. Among others, he shews most clearly, from the nature of the stricture itself, that the operation, even when the instrument does not *wander* from the urethra, does not depend upon dilating the stricture, but upon tearing it, and as the stricture is more resistant than the rest of the canal, the chance is that a false passage is made. When the stricture is of the nature of a bridle, and only one, we may follow the natural passage; but if there are more bridles than one, and especially if the strictures be of the indurated kind, we are almost sure to make a false passage, and the danger is yet greater if we use a conical instrument. If the false passage be between the stricture and meatus, infiltration of urine may not take place; if beyond it, infiltration is inevitable; if between the stricture and meatus however, the tearing and bruising of the parts generally produces simple abscesses, and this is apt to give rise to urinary abscesses; if the instrument makes a passage for itself across the walls of the bladder, the patient speedily sinks, there being only one example to the contrary. As to the treatment by wearing instruments constantly in the

urethra, we think the author shews by the most conclusive facts and reasoning that it is so tedious and dangerous as to deserve no confidence. "In conclusion," he adds, "the treatment by sounds is not only more painful and hazardous than that by bougies, but is equally ineffectual, since the dilatation obtained is neither greater nor more permanent.

If we are unsuccessful in cases of retention by means of sounds and bougies, the life of the patient is placed in imminent danger. Our art has only one resource left, that is, to PUNCTURE the BLADDER. It is difficult to say when this operation becomes necessary; but if a patient has passed no water for fifteen or twenty hours, and all our attempts to relieve him by means of antephlogistic treatment, baths, &c. fail, we are warranted in puncturing the bladder, to prevent worse consequences, such as the rupture of the urethra behind the stricture, or of the bladder itself. Of the three operations recommended, M. Ducamp prefers that above the pubes, and he directs the trocar to be introduced without any previous incision, which is certainly a considerable improvement in the operation. Having withdrawn the trocar the urine flows through the silver canula. Within this canula we are to introduce another of gum elastic, shut and rounded off at its extremity, and having two eliptical lateral openings like a sound, and both canula are to be passed to the bas-fond of the bladder, and fixed by fillets to a bandage passing round the trunk. The canulæ ought not to be withdrawn till the natural passage for the urine is restored. If there is any probability that an abscess already exists beyond the stricture, we think the operation in the perineum entitled to the preference, because it is probable that even though we puncture above the pubes, an incision into the perineum may be necessary.

We believe Mr. Hunter to have been the first who practised with success the mode of cure by means of LUNAR CAUSTIC. The advantages and defects of this mode of cure, are discussed at great length by Ducamp. The advantages being known and appreciated by every surgeon in this country, require not that we should insist upon them. The disadvantages, however, are also considerable; and it is chiefly from the facts contained in the works of Sir Everard Home that M. Ducamp decides upon these disadvantages. First of all, we always cauterize the walls of the canal, anterior to the stricture, and sometimes destroy them. Secondly, there is great hazard that we produce complete retention. Thirdly, we are liable to open a false passage. Fourthly, we often occasion considerable hemorrhage. Fifthly, we are apt to have the complaint renewed more vio-

lently and intractably than before. That these evils often result from the use of the armed bougie, the cases recorded by Sir Everard Home sufficiently prove; and if the new, and what Ducamp calls his modified treatment, only stand the test of experience, we think it ought to supersede entirely the mode of treatment by armed bougies. Of the plan recommended by Mr. Whately, our author does not speak in favourable terms.

To destroy, says M. Ducamp, the morbid disposition of the parts which form the stricture, and to bring them into the healthy condition of the rest of the canal, are the chief indications which we are to hold in view in the treatment of stricture-urethra. The nitrate of silver is still the agent which he employs to fulfil the first part of this indication, and it is chiefly in his means of applying it that the merit of his mode of treatment consists. To apply caustic properly it ought to touch the strictured part only; for example, if the opening of the stricture be towards the inferior wall of the urethra, it is to the superior wall that the caustic ought to be applied; and if the stricture be of two, three, or more lines in extent, from before backwards, it ought to be applied in the whole of this extent. The first step then, is to ascertain the situation of the opening of the stricture and its extent. For this purpose he employs an instrument called a *sonde exploratrice.* A bit of silk is dipped into a composition of equal parts if diacholon, yellow wax, and resin, and being moulded into shape, is fastened to the end of a gum elastic canula. The instrument being introduced, the exact form and situation of the stricture is impressed upon it; and, as all the instruments which he uses are divided into inches, and lines, a single glance enables him to ascertain the depth of the stricture. The changes which it undergoes by treatment, may all readily be ascertained by this same exploring instrument.

For the purpose of introducing bougies, in difficult cases, he makes use of an instrument called a CONDUCTOR, which is a gum elastic sound open at both ends. A piece of waxed silk is moulded upon the anterior end, so as to shut the opening and form a smooth rounded head. When introduced to the obstacle, the waxed silk is withdrawn, and if the opening be in the centre of the stricture, a bougie passes directly into it from the conductor. If the opening be above or below, and this is ascertained by the *sonde exploratrice,* as well as the degree of its deviation from the centre, a conductor is used with a projecting lateral part at its extremity, which projecting part, being turned below when the opening is above, and *vice versa,* the

opening of the stricture and that of the conductor are thus brought into contact; the bougie used, ought to be proportioned to the opening in the stricture, so that it may enter with the gentlest force. The bougies employed are only eighteen lines in length, and are fastened firmly to a gum elastic tube, furnished with a pad at its extremity. The anterior opening of the conductor being narrower than the rest of the tube, the pad is arrested at this point. If it is wished to enlarge the opening in the stricture, a slightly tapered bougie is employed. By these means the length of the stricture is also easily obtained, by using such bougies as may retain the impression of it. When this cannot be ascertained, however, M. Ducamp has another instrument, which being passed beyond the stricture, by means of a conductor, lateral projections start out, which may be brought accurately in contact with the back of the stricture, and the distance between these projections and the conductor gives the length of the stricture. Lithographic prints are given to illustrate the mechanism of all these instruments, and are perhaps necessary to convey a clear idea of them.

Having, by these means, ascertained all the necessary particulars regarding the stricture, the next step is to apply the caustic to the precise point where it is required. For this purpose, M. Ducamp has invented an instrument which he calls a *porte-caustique*. This instrument is composed of a canula of gum elastic and a socket of platina, six lines in length, and of the same diameter as the canula. These two are fixed together by a screw. The platina socket forms a sheath to a cylinder of the same metal, which cylinder, is mounted upon a bougie of gum elastic, and is furnished with a groove, which is filled with nitrate of silver, made fast by fusing it with the flame of a candle. The instrument being carried upon the obstruction, the cylinder is projected beyond its sheath and enters the stricture, to any part of which it may be applied at pleasure, or to the whole of its circumference at the same time, by gently revolving the cylinder by means of the bougie upon which it is mounted. By taking a new impression of the stricture when the eschar has separated, the application of the caustic may be renewed with equal precision. The part of the canal, anterior to the stricture, is uninjured by this process; the stricture itself is touched in the whole of its extent from before backwards, so that the patient is relieved by the first application, whereas, in the old mode, the front of the stricture alone being touched, the whole stricture had to be destroyed before the urine could issue more freely. Often two applications sufficed

to destroy very bad strictures; in general, three were sufficient, and there was seldom occasion for more than four, although there was not more than the tenth of a grain of the nitrate of silver used at each application. This operation produces very little pain, and rarely inflammation, discharge, or hemorrhage. It is next to impossible to make a false passage with it, when the instrument is within the opening of the stricture and there is no force used to push it forwards.

At the expiration of three days, a new impression of the stricture is taken, by which the most projecting parts are pointed out, and a second application of the *porte-caustique* directed. If a bougie, No. 6, now frees the obstacle, the cure is completed by dilatation, but if it does not pass, a third application is made, and so on till a bougie of this size can be passed easily.

If there be a second or third stricture, these are treated in the same manner. They are generally at the depth of six or six and a half inches, in which latter case the instrument requires to be slightly modified. If the stricture is of great length, it is better to destroy it progressively, in portions of two or three lines, than to attempt touching it in its whole extent at one application. When the opening is above or below, the *porte-caustique* must be furnished with a lateral elevation near its extremity, but after the first application this is rarely necessary.

Having now destroyed the thickening and hardening of the stricture, it remains to dilate it to the size of the rest of the canal, for which purpose, instruments called dilators are employed, and bougies with a gentle swell. These dilators are the same with those recommended by Mr. Arnott. To produce a more permanent dilatation, however, the bougies with the swell are employed. The advantage of such bougies, over those in common use, is obvious. It is known that the narrowest part of the canal is at the orifice; but the urethra here is capable of considerable, but only temporary, distention. The *bougie à ventre*, as it is called, once introduced, the chief difficulty is overcome. Its use is alternated with the dilator. In this way the author flatters himself strictures may be dilated with great facility, after the caustic has been applied. He put this to the proof, in a patient who had undergone the treatment, by many sounds in the canal, for a period of two months, after which period only a sound, No. 8, could be introduced. Two applications of the caustic sufficed to destroy the obstacle; on the seventh day of the treatment, a bougie, with a swell two and a half lines in diameter, was introduced; on the ninth day, one of three lines; on the thirteenth, one of three lines and a half, on the sixteenth, one of four lines, and on the twentieth, the pa-

tient was shewn to the reporters, appointed by the Institute to examine M. Ducamp's work, and this enormous bougie was introduced with ease and without encountering any obstacle.

When M. Ducamp is called to a case of retention, he first passes a fine elastic gum bougie into the canal, and if it passes the obstacle he leaves it till the patient feels a strong desire to pass urine; he then gently withdraws the bougie, and the urine filling the space which it occupied, issues by a small jet. When as much water is passed as is possible, the bougie is again introduced, and the same process repeated; and in the mean time the patient is bled, has twenty or thirty leeches to the anus and perineum, with opiate and emollient glysters, warm baths, emollient drinks, and rest, and low diet are prescribed. If the bougie cannot be passed, he takes an impression of the stricture by the exploring sound, and introduces a small bougie by means of a conductor, which is replaced immediately by a larger one, and when the desire to pass urine becomes strong, both instruments are softly withdrawn, and the urine flows in a small jet. If, contrary to all M. D.'s experience, the urine does not flow after the second bougie is withdrawn, a small elastic gum catheter may be introduced into the bladder by means of the conductor.

The destruction of a stricture alone, as we may learn from the works of Sir Everard Home, often cures urinary fistulæ; but if it does not, the treatment pursued by M. Ducamp is not to leave a catheter constantly in the passage to produce irritation and discharge: he draws off the urine each time the patient feels inclined. In this way the fistula is cured much more certainly and rapidly. In those rare, but difficult cases, where the urine ceasing entirely to flow by the urethra, passes through the fistula, and complete obliteration of the natural passage succeeds, he recommends before all other means, the use of the armed bougie, and the frequent injection of tepid water to wash out the eschars. As hemorrhage frequently arises from this mode of treatment, he recommends filling the bleeding cavity with wax by means of an exploring sound, on the same principle that dentists stop bleeding from the cavity of an extracted tooth.

We have perused this volume with great pleasure, on account of the instructing and ingenious details which it contains. Our author is intimately acquainted with the excellent writings of Hunter, Home, Bell, and, indeed, all the English writers upon the subject of which he treats, and he has drawn materials freely from the three we have named. The interesting cases with which the volume is concluded, can hardly, perhaps, be taken as tests of the success, or at least of the permanency of his cures, as most of these have been performed within the two last years.

VANDENZANDE ON PERITONITIS AND PUERPERAL FEVER.*

The principal object of this publication is to recommend a peculiar plan of TREATMENT, which the author has adopted in the puerperal peritonitis, and which, though not unknown, is very far from being generally employed. This plan consists in the administration of calomel and opium, after the manner first published by Dr. Hamilton of Ipswich. (*Vide* DUNCAN's *Commentaries, vol.* 9.) I present it, says the author, with the confidence inspired by twelve years' practice in my own hands, and of those who have not been led to refuse their assent, by the spirit of system and vulgar prejudice. He assumes some merit to himself in this respect, that neither Dr. Hamilton, nor his followers employed the plan exclusively in puerperal peritonitis, and that they took blood before they resorted to its use. He also asserts that he has exceeded them in the quantity of calomel and opium, and occasionally ordered mercurial frictions in addition.

The SYMPTOMS of the disease are pain and swelling of the abdomen, fever, small quick pulse, distress, and the impossibility of lying on the side. The pain is the symptom that should principally fix attention, as its intensity indicates the degree of disease. It *precedes* and does not *succeed* the suppression of the lochia as some, from theory, assert; attention will distinguish it from after-pains.

DISSECTION shews that this disease is situated in the peritoneum, which is found inflamed and changed in the manner usual in inflammations of serous membranes. The author considers that puerperal fever where uncomplicated, is not contagious, though it is occasionally epidemic, particularly in large hospitals. After mentioning the various modes of treatment hitherto pursued, such as blood-letting, and emetics, he concludes that these have always a tendency to aggravate the symptoms, where the peritoneal affection is primary. He adds, that even when the inflammatory nature of the disease was recognised, and an antiphlogistic treatment adopted, the success was not greater than under opposite circumstances, and that there were nearly as many victims as cases of puerperal peritonitis; such at least was the result of his own experience in the year 1808, when he was appointed physician to the civil Hospital at Antwerp. It was at

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* Observations pratiques sur la Maladie connue sous le nom de Peritonite et de Fievre Puerperale &c.; par G. Vandenzande M.D. Anvers. 1821, 8vo.

that time, that he resorted to calomel and opium, with occasional mercurial frictions, and he met with astonishing success from the plan. If we are to believe his report, the cure of the disease becomes certain, so soon as the mercurial action has been excited in the salivary glands, and when calomel does not suffice to produce this effect, he advises the substitution of some other mercurial preparations, as the black oxide, or the soluble mercury of Hahnemann, in the dose of a grain four or five times a day, with the addition of opium, or what he considers preferable, hyoscyamus. He considers that this treatment has the merit, not only of curing, but even of preventing peritonitis, and adds, that since the time of its adoption, as all the attendants and pupils in his hospital can testify, peritonitis, formerly very common, has become a most unfrequent occurrence, and, that for many years, no instance has happened in which it proved fatal. This fortunate change he attributes to the speedy manner in which the very commencement of the disease is extinguished.

The FACTS contained in this little work, certainly deserve to fix the attention of the profession, from the contrast which they present between the results of experience and theory. We are aware that they are not new, but we question whether they have not been, in general, regarded rather as anomalies to be wondered at, than examples to be followed. The author, like all those who adopt peculiar plans, attempts to raise his own at the expence of those opposed to it; thus he gives a very incorrect opinion of the effects of blood-letting in this disease, for in no complaint, when timely and properly employed, is it more beneficial. When change of structure and disorganization have taken place it cannot be expected to succeed; but neither can calomel and opium or any thing else; and indeed Professor Vandenzande takes particular pains to assure us that the uniform success of his plan, depends on its prompt employment at the first signs of disease. This is all that the advocates of blood-letting require. We cannot doubt, from the facts, the efficacy of calomel and opium, but in this country it has never been considered, and probably never will, but as a substitute for blood-letting, when rendered improper by the state of the patient. Such at least, has been our own feeling, and we confess, that, in acute cases, we never have yet been bold enough to quit a treatment with which we feel satisfied, for one, of which, however highly recommended, we have had no experience.

How will the theorists of the New Italian and French schools, reconcile such facts, as we have above described, with their peculiar doctrines? There is not any point on which they are more decided than on the stimulant or phlogistic effects of

opium. M. Broussais and his followers will, probably, as they have already done, impugn the truth of such relations, but we give the Italians credit for more candour; they will see that this is one of the things that prove they have been rather hasty, and begun to build on an uncertain foundation.

British Review.

Dr. Mason Good on the Study of Medicine *.

This is one of the best books a critic could desire to cut up, or to praise; for it has, like human nature, several very obvious defects, and many prominent excellences, any of which might be pitched upon by the reviewer, according to his humour, and made the theme of any given number of periods and paragraphs, all marshalled in imposing array, for the purpose of proving that the author knows nothing, and the reviewer every thing; or that though the author may be learned and judicious, the critic is by far his superior in profound erudition and scholarship, as well as in all the characteristics of exalted talent and heaven-born genius.

We have bethought us of more than one way by which we could show our acumen and skill in travelling over a field so extensive as the study of Medicine. We could, for example, as it would be hopeless to embrace the whole, take up one of the leading branches of the study, such as Physiology, and examine exclusively what our very learned author in his admirable Physiological Proems has collected, elucidated, and proved, or rendered probable, on this interesting, though still obscure subject. Or, to accommodate such of our readers as are more alive to direct practical facts, than to general principles, we could confine our review to his plans of treatment, and their failure or success. Or, we could take a sketch of the most interesting of the numerous original cases which he has given in illustration of his doctrines and opinions. Or, we could take a ramble through the whole work, and pick up, at a venture, whatever might meet our eye to eulogise or to condemn. But we have, upon consideration

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* The Study of Medicine. By John Mason Good, M.D.F.R.S. &c. 4 vols. 8vo. pp. 2819, London, 1822. Price 64s.

these and several other methods of reviewing the work, rejected them as inadequate to give our readers a fair estimate of its value, and have determined to confine our analysis to a single disease, selected from each of his six classes. We think also, that it will render our view of his system more complete, to give a condensed detail of his nosology, particularly as we are pretty certain that it is far from being well known to many of our readers.

Nosological systems are partly a necessary evil. All are exceedingly imperfect, and must be so from the infinite variety of disease, and the limited powers of man to perceive all their links of connection; but as the great Frank justly remarks—"Systemata [Nosologiæ] linguam medicam a polo ad polum diversissimis gentibus perspicuam reddunt; a cujus tam longo neglectu, et confusione vere Babylonica, magna inter laborantes exorta est discordia et vocum, magna obscuritas." (*De Curandis Homin. Tom.* 1. *Intr.*). Notwithstanding our rooted aversion to word-making and name-coining, we think that Dr. Good has been very successful in simplifying the arrangement of diseases, though he has, we think, in several instances gone rather far in altering established terms. But with all its imperfections, it seems to be the most perspicuous system hitherto published. We shall, therefore, preface each of our six analyses by the Nomenclature of the class, whence it is selected.

CLASS I. CŒLIACA, Diseases of the Digestive Function.

ORD. I. ENTERICA, Affecting the Alimentary Canal.

GEN. I. ODONTIA, Misdentition. SPEC. 1. O. DENTITIONIS, Teething; 2. DOLOROSA, Tooth-ache; 3. STUPORIS, Tooth-edge; 4. DEFORMIS, Deformity of the Teeth; 5. EDENTULA, Toothlessness; 6. INCRUSTANS, Tartar of the Teeth; 7. EXCRESCENS, Excrescent Gums.

II. PTYALISMUS, Ptyalism. SPEC. 1. P. ACUTUS, Salivation; 2. CHRONICUS, Chronic Ptyalism; 3. INERS, Drivelling.

III. DYSPHAGIA, Dysphagy; SPEC. 1. D. CONSTRICTA, Constrictive Dysphagy; 2. ATONICA, Atonic Dysphagy; 3. GLOBOSA, Nervous Quinsy; 4. UVULOSA, Uvular Dysphagy; 5. LINGUOSA, Lingual Dysphagy.

IV. DIPSOSIS, Morbid Thirst; SPEC. 1. D. AVENS, Immoderate Thirst; 2. EXPERS, Thirstlessness.

V. LIMOSIS, Morbid Appetite; SPEC. 1. L. AVENS, Voracity; 2. EXPERS, Long Fasting; 3. PICA, Depraved Appetite; 4. CARDIALGIA, Heart-burn. Water-brash. 5. FLATUS, Flatulency; 6. EMESIS, Sickness, Vomiting. 7. DYSPEPSIA, Indigestion.

VI. COLICA, Colic. SPEC. 1. C. ILEUS, Ileac Passion: 2. RHACHIALGIA, Colic of Poitou. Painter's Colic. 3. CIBARIA, Surfeit; 4. FLATULENTA, Wind Colic; 5. CONSTIPATA, Constipated Colic; 6. CONSTRICTA, Constrictive Colic.

VII. COPROSTASIS, Costiveness. SPEC. 1. C. CONSTIPATA, Constipation; 2. OBSTIPATA, Obstipation.

VIII. DIARRHŒA, Looseness. SPEC 1. D. FUSA, Feculent looseness; 2. BILIOSA, Bilious Looseness; 3. MUCOSA, Mucous Looseness; 4. CHYLOSA, Chylous Looseness; 5. LIENTERIA, Lientery; 6. SEROSA, Serous Looseness; 7. TABULARIS, Tabular Looseness; 8 GYPSATA, Gypseous Looseness.

IX. CHOLERA, Cholera. SPEC. 1. C. BILIOSA, Bilious Cholera; 2. FLATULENTA, Wind Cholera; 3. SPASMODICA, Spasmodic Cholera.

X, ENTEROLITHUS, Intestinal Concretions. SPEC. 1. E. BEZOARDUS, Bezoar; 2. CALCULUS, Intestinal Calculus; 3. SCYBALUM, Scybalum.

XI. HELMINTHIA, Worms. SPEC. 1. H. ALVI, Alvine Worms; 2. PODICIS, Anal Worms; 3. ERRATICA, Erratic Worms.

XII. PROCTICA, Proctica; SPEC. 1. P. SIMPLEX, Simple Proctica; 2. SPASMODICA, Spasmodic Stricture of the Rectum; 3. CALLOSA, Callous Stricture of the Rectum; TENESMUS, Tenesmus; 5. MARISCA, Piles; 6. EXANIA, Prolapse of the Fundament.

ORD. II. SPLANCHNICA, affecting the Collatitious Viscera.

GEN. I. ICTERUS, Yellow Jaundice, SPEC. 1. I. CHOLŒUS, Biliary Jaundice; 2 CHOLOLITHICUS, Gall-stone Jaundice; 3. SPASMODICUS, Spasmodic Jaundice; 4. HEPATICUS, Hepatic Jaundice; 5. INFANTUM, Jaundice of Infants.

II. MELÆNA, Melena. SPEC. 1. M. CHOLŒA, Black, or Green Jaundice; 2. CRUENTA, Black Vomit.

III. CHOLOLITHUS, Gall-stone. SPEC. 1. C. QUIESCENS, Quiescent Gall-stone; 2. MEANS, Passing of Gall-stones.

IV. PARABYSMA, Visceral Turgescence. SPEC. I. P. HEPATICUM, Turgescence of the Liver. 2. SPLENICUM, Turgescence of the Spleen; 3. PANCREATICUM, Turgescence of the Pancreas; 4, MESENTERICUM, Turgescence of the Mysentery; 5. INTESTINALE, Turgescence of the Intestines; 6. OMENTALE, Turgescence of the Omentum; COMPLICATUM, Turgescence compounded of various organs.

Among the various important diseases in this class, which claim attention, such as cholera, jaundice, dyspepsia, and ptyalism, we shall select, as a sequel to our former paper on the physiology of the teeth, the odontia dolorosa, or tooth-ache; which is, we fear, too much neglected by general practitioners.

TOOTH-ACHE is characterised by acute and excruciating pain of the teeth or their "involucres." The disease has many varieties in consequence of difference of cause, and in many cases, is merely symptomatic of other disorders, such as scurvy, rheumatism, or gout. (*See* VELSCHIUS *Episagm.* 16, *and* HOACHSTETTER, *Dec.* ix. *Obs.* 3.) As a primary affection our author distinguishes four varieties, according as it arises from cold; from decay, or caries; from ossific deposit; or from irritability of the dental or adjoining nerves.

When COLD is the cause of the disease, it appears to act as an irritant, on the very sensible vessels and nerves, which fill the

smooth and marrowless cavity of the tooth. Exposure of a carious tooth, therefore, to a current of cold air, will cause acute pain; and even in many instances, the air appears to act through the substance of a sound tooth. The pain thus produced, will sometimes cease almost immediately on the removal of the cause, or by the application of an opiate. At other times the irritation will extend to the periosteum, and its duplicature, the lining membrane of the socket; and these becoming thickened and tense in consequence of inflammation, the pain may continue permanent.

In TREATING this variety of tooth-ache, our author has conjoined it with that arising from CARIES, and has given a copious and judicious account of the remedies which have been tried. One of the most effectual of these is exhausting or destroying the sensibility of the nerve by the application of opium, or cajeput oil, directly to the dental nerve, or cauterizing it with a hot iron. A similar effect is produced by applications to those nerves of the skin, which appear, though they have not been demonstrated, to be branches of the same nerve, namely, the second and third branches of the fifth pair. Hence relief is procured in tooth-ache, from rubefacients and blisters behind the ear; from burning the edge of the helix of the ear; from rubbing the cheeks with cerambyx moschatus; from holding brandy or hot water in the mouth; from applying the juice of the bruised insect called the lady-bird, coccinella *septem-punctata* to the tooth or gums; or from plugging the hole in the tooth with the root of the peteveria alliacea or guinea-hen-weed of Jamaica. (TRANS. *Stockh. Acad. A. D.* 1644, p. 287.)

When congestion has taken place in the parts adjacent, from rheumatism or inflammation, stimulant SIALAGOGUES are found to be useful, such as chewing the bulbs of alliaceous plants, the root of the seseli vulgare, or the laserpitium siler. These act, as Dr. Good thinks, in consequence of the evacuation of saliva; but when tobacco or camphor, (CULLEN, *Mat. Med. II.* 304.) are used, their sedative powers, may also act in the same way; and it is remarkable, that both in tooth-ache and opthalmia the preparations of asarum are found superior to snuff from tobacco. Electricity has also been tried as a stimulant.

It is worthy of notice that terror, hope, and other strong EMOTIONS of the mind, exert a wonderful influence over tooth-ache, and hence, it appears, that if a patient has confidence in the most absurd charm, he will almost instantaneously experience a cure. This accounts for the miraculous cures performed by animal magnetism, blowing, stroking, and the like. (*see* GLAUBRECHT, *Analecta de Odontalgia*, ZESKE, *Neuer Versucht in Curirung*;

and STUBBES' *Account of Valentine Greatrake.*) Terror operates so powerfully, that it is a rare fact for a person to be actually suffering pain just before the operation of extraction.

The STOPPING of a carious opening in a tooth should only be attempted when there is no pain, which would only be increased by a foreign body. The substances employed are gum-lac, bees-wax, sealing-wax, tin, lead, and gold. The metals, and particularly tin-foil are perhaps the best, but unless the external opening be smaller than the internal cavity, these can with difficulty be retained. Dr. Good proposes to try some of the cements used by stone-masons, which harden under water, such as tuffa, or as Schmeisser calls it, tuffwacke, and taras, which are compounds of iron, alumine, silex, and carbonate of lime. The cement could be introduced in the form of a soft paste, will easily dry, harden, and adhere, and no moisture of the mouth will ever dissolve it. We think that this is well worth a proper trial.

When all these methods fail to alleviate the pain, the only alternative is EXTRACTION, though this should be resorted to with caution, as the pain may arise not from the tooth, but from the socket; besides, if the nerve of the tooth have been rendered torpid or be destroyed, the tooth may prove serviceable and ornamental for many years. One of the most unmanageable sequelæ of extraction is hæmorrhage, which has, sometimes, even proved fatal. (PLATER, *Obs. III.* 773, *and* SCHENCK, *I. Obs.* 403, 405, p. 99). The best ordinary styptic is pressure, with a a piece of sponge, or touch-wood or spunk, or a dossil of lint dipped in a strong solution of alum or sulphuric acid. In a CASE which came under the care of Dr. GOÓD, a young man had been bleeding profusely for five days without cessation and without sleep. He was very pale, and so weak as to be incapable of rising from his bed, while his stools, from the quantity of blood which he swallowed, had all the appearance of melæna. His mouth was crammed with wadding and grumous putrid blood. This was removed, the mouth washed with brandy and water, a little negus, with biscuit sopped in it, was prescribed, and a gargle ordered of equal parts of tincture of catechu and warm water. From this treatment the hemorrhage ceased in about half an hour.

The causes and nature of CARIES in the teeth is a subject of much difficulty. M. Auzebi (*Traitè d'Ontalgie*) is of a nearly similar opinion to that of Mr. John Hunter, who thought the substance of the teeth was destitute of vessels and fibres and not like other bones, and consequently that they are less affected with constitutional diseases; in rickets, for example, the teeth are unaffected, though all the other bones in the body suffer. The argument taken from the perfection in which teeth are produced,

is weakened by the fact, that when a tooth is extracted from a healthy individual, the space is filled up by the enlarged growth of the adjacent ones, of which Dr. Good gives an instance which occurred in his own person. He concludes that the teeth are vascular, though they remain untinged by madder and are impervious to the finest injections; and that caries is the effect of a deranged action in the vessels of the teeth.

M. Ribe tells us, in an interesting paper, that man is the only animal accustomed to hot foods, and almost the only animal affected with carious teeth, (*Amæn. Academ.* VII. 136.) We are also told by Zillæus and Kalm (*Potus Theæ*) that the Indians of North America knew nothing of carious teeth, previous to the introduction of tea and coffee. While these Northern writers reprobate warm beverages, M. De la Salle, (*Journ de Med.*), is equally certain that sugar injures the teeth as well as hot drinks. Our author thinks, however, that if sugar be injurious, it must be from its acid properties. The enamel of the teeth is almost entirely phosphate of lime with a small portion of animal matter; the body of the teeth almost wholly carbonate of lime. Of course the acids which will most injure the teeth are the oxalic, the sulphuric, the tartaric acids, and the succinic. Now though sugar will afford the acetic acid by fermentation, and the oxalic by being distilled with nitric acid, yet in the state of sugar it can have little effect, and if it had, it would certainly act first on the tartar of the teeth, and prevent it from accumulating, but this it has not been observed to do. In the CASE of a young lady who had a fine set of teeth, but who had to use sulphuric acid internally, the teeth have been much injured, the apex of the incisors being as thin as a razor, and constantly chipping off. Dr. Good thinks it may be renovated. This should make us cautious in the use of dentrifices, into which cream of tartar often enters. The acids which will do least injury, are the citric, benzoic, acetous, and boracic; though even these should be avoided when any denudation of the enamel has taken place.

The affection of CARIES may begin either externally or internally, or in consequence of the denudation of the enamel. The first of these is the most common. It is not a disease peculiar to any age or temperament, as both in infancy and old age caries may extend its ravages over the whole teeth. It is remarkable that in phthisis, the teeth are usually much more fine and pearly than in health. In rachitis also they are usually very healthy; often, in consequence, growing out of proportion to the jaw.

Tooth-ache also arises from EXOTOSIS, or a deposit of ossific matter on the roots or fangs. We cannot deny that the teeth

possess absorbents, for the fangs are often much diminished or nearly removed, and if there are absorbents, there must also, to maintain the balance, be secerning vessels. This we might rationally maintain *a priori*, but we have the fact of diseased teeth being incrusted with bone, when extracted to relieve the tooth-ache. The pain arises from the pressure of the bony matter on the periosteum or alveolar membrane. In recent cases, the free application of leeches, or mercurial ointment, or mercurial plaster, may check the deposit, but extraction is the surest radical cure.

Another variety is the NERVOUS TOOTH-ACHE, which cannot be traced to any apparent lesion, and even the painful tooth can seldom be accurately fixed upon. It may be an idiopathic disorder of the dental tunics, but more frequently is sympathetic of pregnancy, chronic rheumatism, or acrimony in the stomach and bowels, probably affecting the sympathetic nerve, which, by its union with a branch of the fifth pair, becomes connected with the teeth. In some cases, Neuralgia of the face, has, from sympathy, been mistaken for tooth-ache, and tooth after tooth has been extracted without relief. In this variety, no general directions for the treatment could be usefully given.

CLASS II.—PNEUMATICA, Diseases of the Respiratory Function.

ORD. I.—PHONICA, Affecting the Vocal Avenues.

GEN. I. CORYZA, Running at the Nose. SPEC. 1. C. ENTONICA, Entonic Coryza; 2. ATONICA, Atonic Coryza.

II. POLYPUS, Polypus. SPEC. 1. P. ELASTICUS, Compressible Polypus. 2. CORIACEUS, Cartilaginous Polypus.

III. RHONCHUS, Rattling in the Throat. SPEC. 1. R. STERTOR, Snoring; 2. CERCHNUS, Wheezing.

IV. APHONIA, Dumbness. SPEC. 1. A. ELINGUIUM, Elingual Dumbness; 2. ATONICA, Atonic Dumbness. 3. SURDORUM, Deaf-Dumbness.

V. DYSPHONIA, Dissonant Voice. SPEC. 1. D. SUSURRANS, Whispering Voice; 2. PUBERUM, Voice of Puberty; 3. IMMODULATA, Immelodious Voice.

VI. PSELLISMUS, Dissonant Speech. SPEC. 1. P. BAMBALIA, Stammering. 2. BLÆSITAS, Misenunciation.

ORD. II. PNEUMONICA, Affecting the Lungs, their Membranes, or Motive Power.

GEN. I. BEX, Cough. SPEC. 1. B. HUMIDA, Common, or Humid Cough; 2. SICCA, Dry Cough; 3. CONVULSIVA, Hooping Cough.

II. LARYNGYSMUS, Laryngic Suffocation. SPEC. 1. L. STRIDULUS, Stridulous constriction of the Larynx.

III. DYSPNŒA, Anhelation. SPEC. 1. D. CHRONICA, Short-breath. 2. EXACERBANS, Exacerbating Anhelation.

IV. ASTHMA, Asthma. SPEC. 1. A. SICCUM, Dry or Nervous Asthma. 2. HUMIDUM, Humid or Common Asthma.

V. EPHIALTES, Incubus. SPEC. 1. E. VIGILANTIUM, Day-Mare. 2. NOCTURNUS, Night-Mare.

VI. STERNALGIA, Suffocative Breast-pang. SPEC. 1. SAMBULANTIUM, Acute Breast-pang. 2. CHRONICA, Chronic Breast-pang.

VII. PLURALGIA, Pain in the Side. SPEC. 1. P. ACUTA, Stitch. 2. CHRONICA, Chronic pain in the Side.

From this class we shall select STERNALGIA, the angina pectoris or syncope anginosa of authors. Dr. Good characterises it as violent pain about the sternum, extending towards the arms, with anxiety, difficulty of breathing, and sense of suffocation. It may be either *acute*, supervening suddenly during exercise, with tendency to syncope, and relieved by rest; or *chronic*, the paroxysms being less violent, but of longer continuance, and recurring frequently with great palpitation of the heart, excited by slight, and often unknown causes, and not relieved by rest. It does not appear that the ancients were acquainted with the disease, which was first fully investigated by Heberden, (*Med. Trans.* vols. ii. and iii.) though Poter has briefly described it as, "Respirandi difficultas quæ per intervalla deambulantibus incidit, sic ut plurimum derepentè." (*Opera Cent.* iii. 22.)

Sternalgia rarely attacks those who are under five-and-forty or fifty years of age. Persons most liable to it, are those who have short necks, and are inclined to corpulency and gout, and, of course, men are more liable to it than women. The acute, is regularly the first form which it assumes, and it is the most apt to prove fatal. It appears suddenly, while the patient is walking, or taking other exercise, particularly after eating. The attack rarely continues more than an hour, even when it proves fatal. When the patient is attacked, he is compelled to cease from all motion; and, if walking against the wind, to turn his back upon it. Dr. Parry gives the case of a gentleman of some resolution, who persevered in walking and the pain left him in a few minutes, (*On Angina Pectoris*) Such courageous efforts have, for the most part been attended with great benefit, though sometimes they have been exerted in vain. The pulse varies but little, though it is sometimes quickened, and sometimes intermits. Palpitation is usually present, and a feeling of sinking and present dissolution. After a few fits have been experienced, a habit of return is induced, and the fit will become more readily induced,—even coughing, swallowing, going to stool, or any slight emotion of the mind, will bring it on. In some cases, it is most frequent in winter, and in others in summer. It usually terminates in sudden death.

The CAUSES of sternalgia are still very obscure, and have given room to much theory and conjecture. On dissection of those who have died from it, there has frequently been found to be structural derangement of the heart, such as ossification of the coronary arteries, of the orifices of the valves of the heart, and of the cartilaginous portions of the ribs. Others have ascribed it to cramp of the diaphragm, to inflammation of the mediastinum; to the gout; (ELSNER *ueber die Brustbräne;* and BENGER. *Algem. Deutsch.*) and to the enlargement of the abdominal viscera. (LATHAM, *Med. Trans.* vol. iv. 16.) Dr. Good, with considerable judgment, thinks that these are more likely to be the consequences than the cause of the disease. Dr. Heberden thought that we could not yet trace the cause from any thing which was known to him, though he was inclined to think it spasmodic, and with his opinion, we must still be content to abide; or perhaps should come nearer the truth by considering it as a complication of neuralgia and spasm. We do not indeed give this as a decided, but as a probable opinion, which agrees with most of the symptoms.

The mode of TREATMENT is scarce less doubtful than the causes. In plethoric cases, bleeding may sometimes be useful, but it has often appeared to be rather injurious; and purgatives are of as little avail. M. Raige-Delorme says, that venesection is always hurtful (*Dict. de Med. l'Ang. de Poitr.*). Antispasmodics and stimulants, especially wine, palliate the pain for a few minutes, but afterwards lose their virtue. Emetics, particularly antimonials, given while the patient is in a recumbent posture, are useful in allaying the violence of the fit, and the diaphoreses thence arising should be promoted by external warmth. Opiates, of which the black drop is the best, camphor, or ether, may be also given with a similar view. During the intervals of attack, we must try to palliate or remove the probable exciting cause, keeping the bowels regularly open, and prescribing an occasional opiate, such as extract of Hyoscyamus. Tonics, such as arsenic, combined with digitalis, and mercury, iron, and bismuth, have been found to be serviceable. (*See* ALEXANDER, *Med. Com. Edin.* v. 99. and Sir G. BLANE, *Med. Chir. Trans.* iv. 136.)

Vicareous drains are recommended, such as an issue in each thigh, large enough to contain two peas of mezereon bark. The Lauro-cerasus, and, of course, the prussic acid, has been said to be powerful, and it may be so, but ought to be used with very great caution. Our author makes no mention of blisters nor moxa, as recommended by M. Raige-Delorme.

CLASS III.—HÆMATICA, Diseases of the Sanguineous Function.

ORD. I.—PYRECTICA, Fevers.

GEN. I. EPHEMERA, Diary Fever. SPEC. 1. E. MITIS, Mild Diary Fever: 2. ACUTA, Acute Diary Fever; 3. SUDATORIA, Sweating Fever.

II. ANETUS, Intermitting Fever; Ague. SPEC. 1. A. QUOTIDIANUS, Quotidian Ague. 2. TERTIANUS, Tertian Ague. 3. QUARTANUS, Quartan Ague. 4. ERRATICUS, Irregular Ague. 5. COMPLICATUS, Complicated Ague.

III. EPANETUS, Remittent Fever. SPEC. 1. E. MITIS, Mild Remittent. 2. MALIGNUS, Malignant Remittent. 3. HECTICA, Hectic Fever.

IV. ENECIA, Continued Fever. SPEC. 1. E. CAUMA, Inflammatory Fever. 2. TYPHUS, Typhous Fever. 3. SYNOCHUS, Synochal Fever.

ORD. II.—PHLOGOTICA, Inflammations.

GEN. I. APOSTEMA, Aposteme. SPEC. 1. A. COMMUNE, Common Aposteme. 2. PSOATICUM, Psoas Abscess. 3. HEPATICUM, Abscess of the Liver. 4. EMPYEMA, Lodgement of Matter in the Chest. 5. VOMICA, Vomica.

II. PHLEGMONE, Phlegmon. SPEC. 1. P. COMMUNIS, Common Phlegmon. 2. PARULIS, Gum-boil. 3. AURIS, Imposthume in the ear. 4. PAROTIDEA, Parotid Phlegmon. 5. MAMMÆ, Abscess of the Breast. 6. BUBO, Bubo. 7. PHIMOTICA, Phimotic Phlegmon.

III. PHYMA, Tubercle. SPEC. 1. P. HORDEOLUM, Sty. 2. FURUNCULUS, Boil. 3. SYCOSIS, Ficous Phyma. 4. ANTHRAX, Carbuncle.

IV. IONTHUS, Whelk. SPEC. 1. I. VARUS, Stone-Pock. 2. CORYMBYFER, Carbuncled Face. Rosy Drop.

V. PHLYSIS, Phlysis. SPEC. 1. PARONYCHIA, Whitlow.

VI. ERYTHEMA, Inflammatory Blush. SPEC. 1. E. ŒDEMATOSUM, Edematous Inflammation. 2. ERYSIPELATOSUM, Erysipelatous Inflammation. 3. GANGRÆNOSUM, Gangrenous Inflammation. 4. VESICULARE, Vesicular Inflammation. 5. PERNIO, Chilblain. 6. INTERTRIGO, Fret.

VII. EMPRESMA, Visceral Inflammation. SPEC. 1. E. CEPHALITIS, Inflammation of the brain. 2. OTITIS, Ear-ache. 3. PAROTITIS, Mumps. 4. PARISTHMITIS, Quinsy. 5. LARYNGITIS, Inflammation of the Larynx. 6. BRONCHITIS, Croup. 7. PNEUMONITIS, Peripneumony. 8. PLEURITIS, Pleurisy. 9. CARDITIS, Inflammation of the Heart. 10. PERITONITIS, Inflammation of the Peritoneum. 11. GASTRITIS, Inflammation of the Stomach. 12. ENTERITIS, Inflammation of the Bowels. 13. HEPATITIS, Inflammation of the Liver. 14. SPLENITIS, Inflammation of the Spleen. 15. NEPHRITIS, Inflamation of the Kidneys. 16. CYSTITIS, Inflammation of the Bladder. 17. HYSTERITIS, Inflammation of the Womb. 18. ORCHITIS, Inflammation of the Testicles.

VIII. OPHTHALMIA, Ophthalmy. SPEC. 1. O. TARAXIS, Lachrymose Ophthalmy. 2. IRIDIS, Inflammation of the Iris. 3. PURULENTA, Purulent Ophthalmy. 4. GLUTINOSA, Glutinous Ophthalmy. 5. CHRONICA, Lippitude; Blear-eye.

IX. CATARRHUS, Catarrh. SPEC. 1. C. COMMUNIS, Cold in the Head or Chest; 2. EPIDEMICUS, Influenza.

X. DYSENTERIA, Dysentery. SPEC. 1. D. SIMPLEX, Simple Dysentery; PYRECTICA, Dysenteric Fever.

XI. BUCNEMIA, Tumid Leg. SPEC. 1. B. SPARGANOSIS, Puerperal Tumid Leg; 2. TROPICA, Tumid Legs of hot Climates.

XII. ARTHROSIA, Articular Inflammation. SPEC. 1. A. ACUTA, Acute Rheumatism; 2. CHRONICA, Chronic Rheumatism; 3. PODAGRA, Gout; 4. HYDARTHRUS, White-swelling.

ORD. III.—EXANTHEMATICA, Eruptive Fevers. Exanthems.

GEN. I. ENANTHESIS, Rash Exanthem. SPEC. 1. E. ROSALIA, Scarlet Fever; 2. RUBEOLA, Measles; 3. URTICARIA, Nettle rash.

II. EMPHLYSIS, Ichorous Exanthem. SPEC. 1. E. MILIARIA, Miliary Fever; 2. APHTHA, Thrush; 3. VACCINIA, Cow-pox; 4. VARICELLA, Water-pox; 5. PEMPHIGUS, Vesicular or Bladdery Fever; 6. ERYSIPELAS, St. Anthony's Fire.

III. EMPYESIS, Pustulous Exanthem. SPEC. 1. E. VARIOLA, Small pox.

IV. ANTHRACIA, Carbuncular Exanthem. SPEC. 1. A. PESTIS, Plague; 2. RUBULA, Yaws.

ORD. IV.—DYSTHETICA, Cachexies.

GEN. I. PLETHORA, Plethora. SPEC. 1. P. ENTONICA, Sanguine Plethora; 2. ATONICA, Serous Plethora.

II. HÆMORRHAGIA, Hemorrhage. SPEC. 1. H. ENTONICA, Entonic Hemorrhage; 2. ATONICA, Atonic Hemorrhage.

III. MARASMUS, Emaciation. SPEC. 1. M. ATROPHIA, Atrophy; 2. CLIMACTERICUS, Decay of Nature; 3. TABES, Decline; 4. PHTHISIS, Consumption.

IV. STRUMA, Scrophula; SPEC. 1. S. VULGARIS, Kings Evil.

V. CARCINUS, Cancer. SPEC. 1. C. VULGARIS, Common Cancer.

VI. LUES, Venereal Disease. SPEC. 1. L. SYPHILIS, Pox; 2. SYPHILODES, Bastard Pox.

VII. ELEPHANTIASIS, Elephant-skin. SPEC. 1. E. ARABICA, Arabian Elephantiasis; Black Leprosy; 2. ITALICA, Italian Elephantiasis; 3. ASTURIENSIS, Asturian Elephantiasis.

VIII. CATACAUSIS, Catacausis. SPEC. 1. C. EBRIOSA, Inebriate Catacausis.

IX. PORPHYRA, Scurvy. SPEC. 1. P. SIMPLEX. Petecchial Scurvy; 2. HÆMORRHAGICA, Land scurvy; 3. NAUTICA, Sea-Scurvy.

X. EXANGIA, Exangia. SPEC. 1. E. ANEURISMA, Aneurism; 2. VARIX, Varix. 3. CYANIA, Blue-skin.

XI. GANGRÆNA, Gangrene. SPEC. 1. G. SPHACELUS, Mortification; 2. USTILAGINEA, Mildew mortification; 3. NECROSIS, Dry Grangrene; 4. CARIES, Caries.

XII. ULCUS, Ulcer. SPEC. 1. U. INCARNANS, Simple healing Ulcer; 2. VITIOSUM, Depraved Ulcer; 3. SINUOSUM, Sinuous Ulcer; 4. TUBERCULOSUM, Warty, excrescent Ulcer; 5. CARIOSUM, Carious Ulcer.

We shall select from this class the OPHTHALMIA IRIDIS, the *Iritis* of Schmidt, and of most modern writers, though the term is quite unclassical, and ought to have been *Iriditis*. In our

first volume (*page* 65) a very full account is given of Schmidt's work, (*Ueber Iritis Nachstaar,*) which is still, we believe, the best on the subject. Dr. Good describes it as inflammation commencing in the iris, the colour of which is changed to green or reddish, the fibres becoming less moveable, and shooting tooth-like processes into the pupil, which is irregularly contracted and greyish.

The exact CHANGE of COLOUR of the inflamed iris, depends upon the colour which it had in health. In a grey or a blue eye, the morbid colour will be green; in a brown or black eye, it will be reddish. The cloudy appearance is caused by a fine flake of coagulable lymph, which spreads over it like a cobweb. If the inflammation be not subdued, a yellowish tubercle forms on some part of the iris, goes on to enlarge and project, and at length bursts, discharging its contents into the anterior chamber. The inflammation now subsides, the pus becomes absorbed, the iris remains permanently expanded and immoveable, and the pupil is closed with the grey web, so that there is a total loss of vision.

Inflammation of the iris is distinguished from that of the cornea, by the latter being suppurative and the former only adhesive. Mr. Travers says, that suppurative inflammation of the cornea, if it spreads to the iris, and becomes merely secondary, the iris gives it the character of adhesive inflammation.

The most frequent CAUSE of the disease is the operation for cataract, though it often is occasioned by a syphilitic taint in the system, or by gout, rheumatism, or common ophthalmia. It is also sometimes concomitant with cutaneous eruptions, particularly erythema mercuriale, or during mercurial courses.

The TREATMENT should consist in freely emptying the vessels by venesection, leeches, and active purgatives. Blisters may then be placed on the temples, or behind the ears, and on the nape of the neck. Cold applications are not found to be advantageous; but fomentations with water, as hot as the eye can bear it, are useful in mitigating the pain. After fomenting, the eye should be carefully wiped dry. The grand specific, however, as we formerly remarked, (*Quart. Journ.* IV. p. 61.) is mercury introduced into the system. This remedy, as our readers all know, has been very highly eulogized by Mr. Travers, both in the Surgical Essays and in his Work on the Eye. When the disease appears to be a consequence of gout, rheumatism, syphilis, or the action of mercury, the treatment adapted to these states of the system must be adopted.—It is but justice to say, that Dr. Good is less at home on diseases of the eye than on most other subjects.

CLASS IV. NEUROTICA, Diseases of the Nervous Function.

ORD. I. PHRENICA, Affecting the Intellect.

GEN. I. ECPHRONIA, Insanity; Craziness. SPEC. 1. E. MELANCHOLIA, Melancholy; 2. MANIA, Madness.

II. EMPATHEMA, Ungovernable Passion. SPEC. 1. E. ENTONICUM, Empassioned Excitement; 2. ATONICUM, Empassioned Depression; 3. INANE, Hair-brained Passion.

III. ALUSIA, Illusion; Hallucination. SPEC. 1. A. ELATIO, Sentimentalism; Mental Extravagance; 2. HYPOCHONDRIAS, Hypochondrism; Low Spirits.

IV. APHELXIA, Revery. SPEC. 1. A. SOCORS, Absence of Mind. 2. INTENTA, Abstraction of Mind; 3. OTIOSA, Brown-study.

V. PARONIRIA, Sleep-disturbance. SPEC. 1. P. AMBULANS, Sleep-walking; 2. LOQUENS, Sleep-talking; 3. SALAX, Night-pollution.

VI. MORIA, Fatuity. SPEC. 1. M. IMBECILIS, Imbecility; 2. DEMENS, Irrationality.

ORD. II. ÆSTHETICA, Affecting the Sensation.

GEN. I. PAROPSIS, Morbid-sight. SPEC. 1. P. LUCIFUGA, Night-sight; 2. NOCTIFUGA, Day-sight; 3. LONGINQUA, Long-sight; 4. PROPINQUA, Short-sight; 5. LATERALIS, Skue sight; 6. ILLUSORIA, False-sight; 7. CALIGO, Opake Cornea; 8. GLAUCOSIS, Humeral Opacity; 9. CATARACTA, Cataract; 10. SYNIZESIS, Closed Pupil; 11. AMAUROSIS, Drop Serene; 12. STAPHYLOMA, Protuberant Eye; 13. STRABISMUS, Squinting.

II. PARACUSIS, Morbid Hearing. SPEC. 1. P. ACRIS, Acute Hearing; 2. OBTUSA, Hardness of Hearing; 3. PERVERSA, Perverse Hearing; 4. DUPLICATA, Double Hearing; 5. ILLUSORIA, Imaginary Sounds; 6. SURDITAS, Deafness.

III. PAROSMIS, Morbid Smell. SPEC. 1. P. ACRIS, Acute Smell; 2. OBTUSA, Obtuse Smell; 3. EXPERS, Want of Smell.

IV. PARAGEUSIS, Morbid Taste. SPEC. 2. P. ACUTA, Acute Taste; 2. OBTUSA, Obtuse Taste; 3. EXPERS, Want of Taste.

V. PARAPSIS, Morbid Touch; SPEC. 1. P. ACRIS, Acute Sense of Touch or general Feeling; 2. EXPERS, Insensibility of Touch or general Feeling. 3. ILLUSORIA, Illusory Sense of Touch or general Feeling.

VI. NEURALGIA, Nerve-ache. SPEC. 1. N. FACIEI, Nerve-ache of the Face; 2. PEDIS, Nerve-ache of the Foot; 3. MAMMÆ, Nerve-ache of the Breast.

ORD. III. CINETICA, Affecting the Muscles.

GEN. I. ENTASIA, Constrictive Spasm. SPEC. 1. E. PRIAPISMUS, Priapism; 2. LOXIA, Wry Neck; 3. ARTICULARIS, Muscular Stiff-joint; 4. SYSTREMMA, Cramp; 5. TRISMUS, Locked-jaw; 6. TETANUS, Tetanus; 7. LYSSA, Rabies; Canine Madness; 8. ACROTISMUS, Suppressed Pulse.

II. CLONUS, Clonic Spasm. SPEC. 1. C. SINGULTUS, Hiccough; 2. STERNUTATIO, Sneezing; 3. PALPITATIO, Palpitation: 4. NICTITATIO, Twinkling of the Eye-lids; 5. SUBSULTUS, Twitching of the Tendons; 6. PANDICULATIO, Stretching.

III. SYNCLONUS, Synclonic Spasm. SPEC. I. S. TREMOR, Trembling; 2. CHOREA, St. Vitus's Dance; 3. BALLISMUS, Shaking Palsy; 4. RAPHANIA, Raphania; 5. BERIBERIA, Barbiers.

ORD. IV. SYSTATICA, Affecting several, or all the Sensorial Powers simultaneously.

GEN. I. AGRYPNIA, Sleeplessness. SPEC. 1. A. EXCITATA, Irritative Wakefulness; 2. PERTÆSA, Chronic Wakefulness.

II. DYSPHORIA, Restlessness. SPEC. 1. D. SIMPLEX, Fidgets; 2. ANXIETAS, Anxiety.

III. ANTIPATHIA, Antipathy. SPEC. 1. A. SENSILIS, Sensile Antipathy; 2. INSENSILIS, Insensile Antipathy.

IV. CEPHALÆA, Head-ache. SPEC. 1. C. GRAVANS, Stupid Head-ache; 2. INTENSA, Chronic Head-ache; 3. HEMICRANIA, Megrim; 4. PULSATILIS, Throbbing Head-ache; 5. NAUSEOSA, Sick Head-ache.

V. DINUS, Dizziness. SPEC. 1. D. VERTIGO, Vertigo.

VI. SYNCOPE, Syncope. SPEC. 1. S. SIMPLEX, Swooning; 2. RECURRENS, Fainting-fit.

VII. SYSPASIA, Comatose Spasm. SPEC. 1. S. CONVULSIO, Convulsion; 2. HYSTERIA, Hysterics; 3. EPILEPSIA, Epilepsy.

VIII. CARUS, Torpor. SPEC. 1. C. ASPHYXIA, Asphyxy; Suspended Animation; 2. ECSTASIS, Ecstacy; 3. CATALEPSIA, Catalepsy; 4. LETHARGUS, Lethargy; 5. APOPLEXIA, Apoplexy; 6. PARALYSIS, Palsy.

Here we shall select NEURALGIA PEDIS ET MAMMÆ, the Nerve-ache of the foot, and of the breast, as being somewhat novel, and worthy of attention. The first is characterised by racking and lancinating pains ranging about the heel, and shooting tremulously in irregular directions towards the ankle and the bones of the tarsus. It is the Neuralgia plantaris of M. Chaussier, though Dr. Good claims the honour of having first described it by the above title. M. Chaussier gives the CASE of M. Marino, a physician of Piedmont, who had been long subject to it, and who was relieved by the mineral waters of Vivadis, and still more by the pressure of a tight bandage.

Dr. Good gives an interesting CASE of a clergyman of London, aged 45, of general good health and excellent spirits, who was, for many years, a victim to Neuralgia Pedis. The paroxysms were short but extremely severe, so much so that he had to relinquish the duties of the pulpit, having been repeatedly interrupted by a fit during their performance. The pain, which extended up the calf to the knee, and ramified to the toes, he compared to scalding verjuice poured over a naked wound.

Every REMEDY which could be suggested by the most skillful practitioners in London was in vain tried in long and tedious succession. The intervals were however repeatedly protracted or alleviated by several internal remedies, and also by a tight ligature. In this state of the case, an eminent surgeon proposed amputation of the limb, to which Dr. Good

very judiciously, we think, objected: first, because the morbid condition of the nerve had as much chance to be in its origin at its extremity; and second, because, perhaps, the violence of the action might in time blunt the sensibility of the nerve. The author's advice was followed, and the second opinion has been confirmed, the disease having at last worn itself out, and the patient having again, for more than a twelve-month, been able to resume the duties of his profession.

The NEURALGIA MAMMÆ is described to be a sharp lancinating pains divaricating from a fixed point in the breast, and shooting equally down the course of the ribs and of the arm to the elbow, the breast retaining its natural size, complexion, and softness.

As, in the preceding instance, our author illustrates this variety by an interesting CASE of a young woman, eighteen years of age, when he first saw her, and then in the second year of the disease. The breast was to appearance natural and healthy, and in the intervals of the fit, would bear pressure without inconvenience. At first the paroxysms were short, but returned five or six times in the day. As the disease advanced, the pain became more severe and extensive, and the fits recurred hourly, and sometimes oftener, and were at length so frequent and vehement as to embitter her life, and incapacitate her for all employment. Her general health remained, however, unaffected, and her menstruation was regular.

As in the former case, every REMEDY was tried, such as bleeding, local and general, frequently and profusely repeated; purgatives of all kinds; tonics and anti-spasmodics of all kinds; the hot and the cold-bath; electricity and galvanism; rubefacients, blisters, setons, and issues: but all were tried in vain, not even temporary relief being procured. Narcotics, indeed, produced drowsiness and stupor, but when that was over, the fits were as severe and frequent as before. The nux vomica was expected to have some effect, but though it was given in infusion, in the dose of eight grains, three or four times a day, it only produced confusion of head, and general numbness, without relieving the paroxysm in the least. After four years suffering, she, all at once, found herself much better, though she had relinquished all medical means except a seton under the breast. When this healed she relapsed, but upon its re-insertion she again went on improving, and there is hopes of her recovery.

CLASS V. GENETICA, Diseases of the Sexual Function.

ORD. I. CENOTICA, Affecting the Fluids.

GEN. I. PARAMENIA, Mis-menstruation. SPEC. I. P. OBSTRUCTIONIS, Obstructed Menstruation; 2. DIFFICILIS, Laborious Menstruation;

3. SUPERFLUA, Excessive Menstruation; 4 ERRORIS, Vicarious Menstruation; 5. CESSATIONIS, Irregular Cessation of the Menses.

II. LEUCORRHŒA, Whites. SPEC. I. L. COMMUNIS, Common Whites; 2. NABOTHI, Labour-show; 3. SENESCENTIUM, Whites of advanced Life.

III. BLENORRHŒA, Gonorrhœa. SPEC. 1. B. SIMPLEX, Simple Urethral Running; 2. LUODES, Clap; 3. CHRONICA, Gleet.

IV. SPERMORRHŒA, Seminal Flux. SPEC. 1. S. ENTONICA, Entonic Seminal Flux; 2. ATONICA, Atonic Seminal Flux.

V. GALACTIA, Mislactation. SPEC. 1. G. PRÆMATURA, Premature Milk-flow; 2. DEFECTIVA, Deficient Milk-flow; 3. DEPRAVATA, Depraved Milk-flow; 4. ERRATICA, Erratic Milk-flow; 5. VIRORUM, Milk-flow in Males.

ORD. II. ORGASTICA, Affecting the Orgasm.

GEN. I. CHLOROSIS, Green Sickness. SPEC. 1. C. ENTONICA, Entonic Green Sickness; 2. ATONICA, Atonic Green Sickness.

II, PRŒOTIA, Genital Precocity. SPEC. 1, P. MASCULINA, Male Precocity; 2. FEMININA, Female Precocity.

III. LAGNESIS, Lust. SPEC. 1. L. SALACITAS, Salacity; 2. FUROR, Lascivious Madness.

IV. AGENESIA, Male Sterility. SPEC. 1. A IMPOTENS, Male Impotency; 2. DYSPERMIA, Seminal Mis-emission; 3. INCONGRUA, Copulative Incongruity.

V. APHORIA, Female Sterility; Barrenness. SPEC. 1. A. IMPOTENS, Barrenness of Impotency; 2. PARAMENICA, Barrenness of Mis-menstruation 3. IMPERCITA, Barrenness of Irrespondence; 4. INCONGRUA, Barrenness of Incongruity.

VI. ÆDOPTOSIS, Gential Prolapse. SPEC. 1. A. UTERI, Falling down of the Womb; 2. VAGINÆ, Prolapse of the Vagina; 3. A. VESICÆ, Prolapse of the Bladder; 4. COMPLICATA, Complicated Genital Prolapse; 5. POLYPOSA, Genital Excrescence.

ORD. III. CARPOTICA, Affecting the Impregnation.

GEN. 1. PARACEYSIS, Morbid Pregnancy. SPEC. 1. P. IRRITATIVA, Constitutional derangement of Pregnancy; 2. UTERINA, Local derangement of Pregnancy; 3. ABORTUS, Abortion.

II. PARODYNIA, Morbid Labour. SPEC. 1. P. ATONICA, Atonic Labour; 2. IMPLASTICA, Unpliant Labour; 3. SYMPATHETICA, Complicated Labour; 4. PERVERSA, Preternatural Presentation; 5. AMORPHICA, Impracticable Labour; 6. PLURALIS, Multiplicate Labour; 7. SECUNDARIA, Sequential Labour.

III. ECCYESIS, Extra-uterine Fetation. SPEC. 1. E. OVARIA, Ovarian Exfetation; 2. TUBALIS, Tubal Exfetation; 3. ABDOMINALIS, Abdominal Exfetation.

IV. PSEUDOCYESIS, Spurious Pregnancy. SPEC. 1. P. MOLARIS, Mole; 2. INANIS, False Conception.

Here we shall select APHORIA, FEMALE STERILITY OR BARRENNESS or inability to conceive offspring, of which Dr. Good makes four varieties. It is singular that hitherto the disease has had no distinct place in Nosological systems.

1. APHORIA IMPOTENS, barrenness of impotence, which may be either atonic or organic, is the imperfection or abolition of conceptive power. It is exactly parallel with Agenesia, im-

potens in males. In atonic Impotency, the sexual desire may be present, but there is direct imbecility from want of tone, occasioned by luxurious living, intemperate venery, or by contusions in the loins, or over-exertion in walking. The TREATMENT is seldom very successful. All the boasted approdisiacs are more injurious than advantageous, such as wine, cantharides, penny-royal, nests of the Java swallow; but some dependence may be placed on warm general tonics, and stimulant bitters, such as metallic salts, preparations of iron, ginseng, and above all, blisters, and other local irritants Flagellation, and stinging with nettles have been said to be efficacious, and may be so on the same principle. The aphoria organica may arise from imperforate or obstructed vagina or hymen; defective avarice or fimbriæ. In most of those cases a cure is doubtful. There are not wanting cases, in which the vagina has been too narrow to admit the penis and also where the hymen has been tense and unbroken, in which conception has taken place. Ruyset mentions a case in which the hymen was unbroken at the time of labour. (REIDLIN, *Linn. Med.* 1696, p. 16. *See also Quart. Journ.* IV. 466.) Dr. Good thinks that in all such, there must have been a partial admission of the penis, sufficient to give the sexual paroxysm, and that the male semen must have found its way through some aperture, however small. Mr. John Burns' notion of seminal aura is, to say the least of it, quite improved and improbable. Surig gives an account of a dissolution of marriage from this cause. (*Gynæcolog* p. 223.) Dr. Good was applied to by a new married couple in which the hymen resisted all attempts. The lady however would not consent to be operated upon by a surgeon, and became her own operator with success.

2. APHORIA PARAMENICA, or Barrenness from Mis-menstruation, is described to be catamenial discharge, morbidly retained, secreted with difficulty, or in profusion. It is not always necessary to impregnation, that a female menstruate, if the retention of the menses is not concatenated with diseases. In some rare instances it has occurred for the first time after sixty years of age. Impregnation seldom takes place, however, where the catamenia are attended with great pain, are small in quantity, or morbid in quality. When also it returns too frequently, or is too profuse the uterus becomes too much debilitated to conceive, and there is seldom much sexual desire. The CURE must be attempted according to the nature of these different symptoms. (*See Quart. Journal, vol.* IV. p. 118, &c.)

3. APHORIA IMPERCITA or barrenness of Irrespondence, is described as sterility produced by personal aversion, or want of

appotency or desire. Dr. Good thinks it possible, though not very likely, that impregnation should succeed to rape. If it do, the constitutional, orgasm of the female must be beyond the control of virtuous recoil or personal aversion. Where, however, there is a cold aversion, from personal disgust or the like, impregnation cannot follow. By medicine this is irremediable, though approdisiacs have been wickedly tried. It should teach us the folly, of forming family connections, where there is not, and cannot be a respondence of affection.

4. APHORIA INCONGRUA, or barrenness of incongruity, is described to be the conceptive power inaccordant with the constituent principles of the seminal fluid received on the part of the male. This is also new to nosology. In agricultural language, it supposes that the respective seed, however sound in itself, may not be adapted to the respective soil. For illustrations he refers to numerous authorities, such as Sauvages, Haguenot, Chaptal, Etmuller, Forestus, Timæus, Hornung, Ballonius, Schurig, Ab Heer, and Parr. The cases are chiefly proved by the parties becoming both fruitful after divorce and re-marriage, or one of them after the death of the other. He recommends generous diet, exercise, the cold-bath, particularly in the form of bidet, the stimulant resins and balsams, but, above all, abstinence by mutual consent.

CLASS VI. ECCRITICA, Diseases of the Excernent Function.

ORD. I. MESOTICA, Affecting the Parenchyma.

GEN. I. POLYSARCIA, Corpulency. SPEC. 1. P. ADIPOSA, Obesity.

II. EMPHYMA, Tumour. SPEC. 1. E. SARCOMA, Sarcomatous Tumour; 2. ENCYSTIS, Encysted Tumour; 3. EXOSTOSIS, Bony Tumour.

III. PAROSTIA, Mis-ossification. SPEC. 1. P. FRAGILIS, Fragility of the Bones; 2. FLEXILIS, Flexility of the Bones.

IV. CYRTOSIS, Contortion of the Bones. SPEC. 1. C. RHACHIA, Rickets; 2. CRETINISMUS, Cretinism.

V. OSTHEXIA, Osthexy. SPEC. 1. O. INFARCIENS, Parenchymatous Osthexy; 2. IMPLEXA, Vascular Osthexy.

ORD. II. CATOTICA. Affecting internal Surfaces.

GEN. I. HYDROPS, Dropsy. SPEC. 1. H. CELLULARIS, Cellular Dropsy; 2. CAPITIS, Dropsy of the Head; 3. SPINÆ, Dropsy of the Spine; 4. THORACIS, Dropsy of the Chest; 5. ABDOMINIS, Dropsy of the Belly; 6. OVARII, Dropsy of the Ovaries; 7. TUBALI, Dropsy of the Fallopian Tubes; 8. UTERI, Dropsy of the Womb; 9. SCROTI, Dropsy of the Scrotum.

II. EMPHYSEMA, Inflation; Wind-Dropsy. SPEC. 1, E. CELLULARE, Cellular Inflation; 2. ABDOMINIS, Tympany.

III. PARURIA, Mismicturition. SPEC. 1. P. INOPS, Destitution of Urine; 2. RETENTIONIS, Stoppage of Urine; 3. STILLATITIA, Strangury; 4. MELLITA, Saccharine Urine; Diabetes; 5. INCONTINENS, Incontinence of Urine; 6. INCOCTA, Unassimilated Urine; 7. ERRATICA, Erratic Urine.

IV. LITHIA, Urinary Calculus. SPEC. 1. L. RENALIS, Renal Calculus; 2. VESICALIS, Stone in the Bladder.

ORD. III. ACROTICA, Affecting the External Surface.

GEN. I. EPHIDROSIS, Morbid Sweat. SPEC. 1. E. PROFUSA, Profuse Sweat; 2. CRUENTA, Bloody Sweat; 3. PARTIALIS, Partial Sweat. 4. E. DISCOLOR, Coloured Sweat; 5. OLENS, Scented Sweat; 6. ARENOSA, Sandy Sweat.

II. EXANTHESIS, Cutaneous Blush. SPEC. 1. E. ROSEOLA, Rose Rash.

III. EXORMIA, Papulous Skin. SPEC. 1. E. STROPHULUS, Gum Rash; 2. LICHEN, Lichenous Rash; 3. PRURIGO, Pruriginous Rash; 4. MILIUM, Millet Rash.

IV. LEPIDOSIS, Scale Skin; SPEC. 1. L. PITYRIASIS, Dandriff; 2. LEPRIASIS, Leprosy; 3. PSORIASIS. Dry-Scall; 4. ICTHYIASIS, Fish Skin.

V. ECPHLYSIS, Blains. SPEC. 1. E. POMPHOLYX, Water blebs; 2. HERPES, Tetter; 3. RHYPIA, Sordid Blain; 4. ECZEMA, Heat Eruption

VI. ECPYESIS, Humid Scall. SPEC. 1. E. IMPETIGO, Running Scall; 2. PORRIGO, Scabby Scall; 3. ECTHYMA, Papulous Scall; 4. SCABIES, Itch.

VII. MALIS, Cutaneous Vermination. SPEC. 1. M. PEDICULI, Lousiness; 2. PULICIS, Flea bites; 3. ACARI, Tick-bite; 4. M. FILARIÆ, Guinea Worm; ŒSTRI, Gad-fly Bite; 6. GORDII, Hair Worm.

VIII. ECPHYMA, Cutaneous Excrescence. SPEC. 1. E. CARUNCULA Caruncle; 2. VERRUCA, Wart; 3. CLAVUS, Corn; 4. CALLUS, Callus.

IX. TRICHOSIS, Morbid Hair. SPEC. 1. T. SETOSA, Bristly Hair; 2. PLICA, Matted Hair; 3. HIRSUTIES, Extraneous Hair; 4. DISTRIX, Forky Hair; 5. POLIOSIS, Gray Hairs: 6. ATHRIX, Baldness; 7. AREA, Areated Hair; 8. DECOLOR, Miscoloured Hair.

X. EPICHROSIS, Macular Skin. SPEC. 1. E. LEUCASMUS, Veal Skin; 2. SPILUS, Mole; 3. LENTICULA, Freckles; 4. EPHELIS, Sunburn; 5. AURIGO, Orange Skin; 6. PŒCILIA, Pye-balled Skin; 7. ALPHOSIS, Albino Skin.

From this class we shall select the example of OSTHEXIA or Ossification, in which, soft parts become more or less indurated by a superfluous secretion, and deposite of ossific matter. As the ossific matter of the body is continually expended, a constant supply becomes indispensible, which is derived from the food, and, by an unknown process, from the blood, even when the food contains no lime. In some instances this secretion is deficient, in the present it is in excess, and becomes deposited in the membranes or tunics, and in other parts of the system. In old age, when both the secreting and absorbent vessels are debilitated, though the ossific matter be deficient in quantity, it is not carried off so quickly by the absorbents, and is apt to accumulate, first in the bones, rendering them compact and brittle, and afterwards, in the lymphatics and the coats of the blood vessels, rendering them rigid and even bony. In more early life the same

consequence arises apparently from an excessive secretion of ossific matter. Dr. Good describes two species of ossification.

1. OSTHEXIA INFARCIENS, or parenchymatous ossification, is characterised by ossific matter being deposited in nodules or amorphous masses, in the parenchyma of organs. The organs most commonly affected with calculous concretions are the kidneys and the bladder; the pineal gland and other parts of the brain are most liable to ossific deposits, of which, cases are given by Schrader, De Graaf, Diemerbroeck, and in many of the medical journals. Baillie, Burnet, Contuli, Plater, Haller, and Pranser mention them as occurring in the lungs, in the heart, in the thymus gland, as well as in the thyroid, the parotid, the sublingual, and most other glands. Paulini records a case of an ossified penis. (*Ephem. Nat. Cur.* II. 5.) Most of the cases have occurred in advanced life, the symptoms varying to infinity. No general directions for treatment can be usefully given. Atonic gout seems often to be a predisposing cause.

2. OSTHEXIA IMPLEXA, or vascular ossification, is characterised by ossific matter being deposited in concentric layers in the tunics of vessels or membranes, rendering them rigid and unimpressible. This may take place in the aorta or other large arteries; or in the membraneous or connecting parts; or in different parts simultaneously. When the aorta is affected it usually extends to some of the other large arteries (BAILLIE, *Morb. Anat.* v. pl. 2. MORGAGNI, *de Sed. et Caus.* xxiii. 11.). There are instances of the aorta being wholly ossified, (BUCKNER, *Misc.* 1727, p. 305); and in one case, so rigidly as to compel the sufferer to maintain an erect position (GUATTINI, *De Aneurism.*). The most troublesome of the membraneous ossifications are those of the pleura and trachea (KIRKRING, *Spec. Anat.* 27.). That the arteries have a natural tendency to become ossific was first shown by Dr. Hunter, and afterwards by Mr. Cruikshank, who proved, that in the formation of all the bones the process begins in the arteries. Dr. Heberden gives the case of an old man who died at the advanced age of four-score, in whom almost all the vessels were converted into cylinders of bone, yet he appeared healthy to the last. The diathesis sometimes extends to the tendons and muscles, rendering the whole frame as stiff as the trunk of a tree. Dr. Henry, of Enniskillen, (*Phil. Trans. for* 1759), gives a case in which this anchylosis took place very extensively.

In TREATING ossification, when it is once ascertained to exist, we must attend to the cause, whether it be from excess of secretion or deficiency of absorption. In the latter case, which occurs in old age, or from scrofula or atonic gout,—warmth, a generous diet, and tonics will form the most rational means

of cure. In the former case, bleeding, purgatives, low diet, and diluent drinks will be most effectual. In both cases, a free use of the vegetable and mineral acids, may tend to dissolve the superabundant calcareous matter already formed.

The little are always fond of nibbling at the great. We every where hear Dr. Good accused of not having attended sufficiently to what is new, particularly to foreign novelties, and blamed for his ignorance of many distinguished authors. We boldly deny the greater part of the charge, though there does appear to be a few minor omissions of this sort. He has not, it is true, given quoted authorities for every sentence in his book, otherwise, he might easily, by the help of Ploucquet and Journal indexes have filled every line of his four volumes with nothing but lumbering quotations of names and titles. Nor has he always alluded to the peculiar views of every author and pamphleteer who has written upon any subject: this was impossible, nor was it wanted. This, however, we will pledge ourselves to be the fact, that there is not one disease in the work, where he has not examined and referred to the standard authorities of the profession, or given his own cases and his own practice, which, so far as we have examined it, appears to be founded on the best modern views, and to do great credit to his judgment, sagacity, and professional skill, of which we have in the present paper given several examples. To please the objectors, and to have made extracts and abstracts of every book, pamphlet, and paper upon every given disease, would have been to render the work a mass of useless learning, visionary theory, and indigested lumber, and besides, would have swelled it into ten times its present magnitude and price. The author had too much good sense not to see the absurdity of such a plan. The book we have no doubt will immediately take its place as a classical and standard work of reference, a credit to the profession, and the country which produced it. To look upon it as a mere compilation, is a very mistaken notion, for through every part of it the intelligence of a highly cultivated mind diffuses an originality, clearness, and consistency of principle, which is but rarely met with in formal treatises and voluminous systems.

We take leave of Dr. Good with our heartiest wishes for the success of his undertaking: the more we examine, the more we admire it for clear and philosophical views, universality of learning and research, and classical beauty of style. For the honour of the profession, we hope it will soon entirely supersede, the lame and contradictory compilation of Dr. Thomas, which has been too long the text book of students and junior practitioners.

Sir Astley Cooper on Dislocations and Fractures of the Joints*.

This work is a noble and splendid specimen of British Surgery; forming, we believe, the most perfect treatise upon dislocations and fractures of the joints, to be found in the English, or indeed in any other language. The author's extensive experience, both as an hospital surgeon and private practitioner, together with the good understanding which he has uniformly maintained with all his professional brethren, young as well as old, many of whom are proud to have been his pupils, have enabled him to bring forward a mass of details, which we think no surgeon can peruse without deep interest, or study without lasting improvement. To say that he has reasoned correctly from these materials, and laid down the most improved rules of treatment applicable to the particular cases, is but saying what the acknowledged powers of observation and reflection of the author should lead us to expect. A work like the present, ought to put to shame the numerous drones, upon whom the advantages of being appointed to public hospitals are thrown away; who are daily looking at disease in all its Protean forms, without advancing the profession one step; and who think they fulfil all their duties to the public, if they merely profit so much by these opportunities, as to be enabled to extend the sphere of their own private practice. Public Institutions, for the benefit of the sick, are thus degraded in public estimation, by being considered in the mere light of ladders, by which practitioners may ascend to fortune. No surgeon or physician ought to be appointed to superintend the sick in Hospitals, who is not both able and willing to become an *instructor;* for it is from the facilities which such situations afford for advancing the science of medicine, that the public, the supporters of these institutions, is chiefly benefited. As to the patients admitted into Hospitals, or persons of a rank in life likely to have recourse to the aid such institutions afford, it may be questioned whether more good or harm results to these individuals from having ease, good living, and medical treatment, with so little care or forethought on their own part, put within their reach. It is therefore by the appointment to

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* A Treatise on Dislocations and Fractures of the Joints, by Slr Astley Cooper, Bart. F.R.S. Surgeon to the King, &c. One volume, Quarto, pp. 562, with 30 plates. Price 1*l.* 11s.6d. London, October 1822.

hospitals of such men as our author that the public at large, and the profession generally, are likely to profit. Sir Astley has performed all the duties of his situation, and performed them well and faithfully, but to say more would be but to flatter him; yet when we see so many surgeons attached to hospitals, too dull to profit by what they see, or too indolent to tell the world what they have learned, we are compelled to join in the deep gratitude which we are persuaded every honest surgeon who reads Sir Astley's book, must feel towards the author.

We would say a word respecting the more than paternal care and interest, with which our author regards the pupils of St. Thomas's and Guy's Hospitals, to whom the present volume is dedicated, but upon this subject, we dare hardly trust our feelings. Of the liberal spirit, however, in which the work has been presented to the public, we cannot speak in terms of sufficient praise. We have been told, on good authority, that the thirty splendid plates attached to the volume are equal in value to the price of the whole book. To those who have purchased his essays, which contain the ground work of the present volume, he offers to print the additional matter in the octavo form for their use—a liberality, which those who make literature a trade, would do well to reflect upon.

An intimate knowledge of the structure and ligaments of the joints is absolutely necessary to enable any one to detect the nature of such accidents as may happen to these parts; for even with this knowledge it is often difficult, sometimes impracticable, when much swelling and effusion of blood supervene upon the injury. The effects of a dislocation, generally, are change of the form of the joint, alteration of the length of the limb, and loss of the power of motion in it; but this last does not take place till some time after the accident. In a very well marked case of dislocation of the femur into the foramen ovale, considerable mobility of the limb remained till three hours after the accident, when it became firmly fixed in its new situation by the permanent or *tonic* contraction of the muscles. Pressure of the displaced bone upon the muscles and nerves, produces obtuse pain, and frequently paralysis, especially of the arm, when the shoulder is dislocated. A case is mentioned of a man's life being endangered by the end of his dislocated clavicle pressing upon his œsophagus.

Rotation of the limb is the best mode of discovering the nature of these accidents, because it rolls the head of the bone. The projections of bones are generally altered in their situations; thus, in dislocation of the hip, the trochanter cannot be felt, or but imperfectly, while in the elbow, the olecranon projects un-

usually, and indeed is our chief guide in detecting the accident. Sometime after the accident, crepitus is felt within the joint from effusion of fibrin, and a thickened state of the synovia; and surgeons would do well to attend to this fact. Generally, however, there is not much subsequent inflammation, though sometimes it is severe, ending in abscess, or even the death of the patient. A man had dislocation of the hip upwards, which was reduced in due time, but encreased swelling came on, with rigors, and in four days the patient died. The capsular ligament, and ligamentum teres were found entirely torn away, and a considerable quantity of pus, extravasated into the surrounding parts.

When the bone is not reduced, it forms for itself a new bed, and slight motion is gradually recovered, though if the lower extremity is dislocated, there is lameness ever after, and if the upper, the power of the limb is much diminished.

When cases of dislocation are examined after death, the bone is found completely removed from its socket; the capsular ligament torn to a great extent transversely, the peculiar ligaments are ruptured, though generally, the tendon of the biceps in dislocations of the os humeri remains untorn; the tendons also, which cover the ligaments, as that of the subscapularis, in dislocation in the axilla, are torn; and according to the extent of the laceration, so is the facility with which the accident recurs after reduction. Some of the muscles are also put upon the stretch even to laceration, as the pectineus and adductor brevis in dislocation of the thigh downwards, giving rise to effusion of large quantities of blood into the cellular membrane. These appearances do not depend solely upon the length of time which has elapsed from the accident, but also upon the kind of structure upon which the head of the dislocated bone is thrown; for if it be imbedded in muscle, the cartilage remains, and a new capsular ligament, formed by condensed cellular substance, surrounds the cartilage, but does not adhere to it. But if the dislocated bone rest upon another bone, or upon a thin muscle over it, the muscle is absorbed, and the two bones pressing upon one another, absorption is produced of the periosteum of the one and cartilage of the other; so that a smooth hollow is formed, around which an ossific deposit takes place from the periosteum, which is then irritated, but not absorbed, forming a cup-like cavity, from which the bone cannot be displaced without fracture. Such are a few of the effects which our author describes as arising from dislocations produced by violence; but there are cases which occur from simple relaxation of the ligaments; from long and forcible extension of the muscles; and

from paralysis. Interesting cases from each of these causes are detailed. One of them, a young gentleman, on board of an East India ship, for some trifling offence was suspended for an hour by the wrist, his foot barely touching a projection on the deck. On his return home, the bone could be easily thrown from its socket, but was as easily reduced, and the muscles had wasted as in paralysis. Ulceration sometimes produces dislocations, by destroying the ligaments, cartilage, and the cavities in which the bones are received. This is frequent in the hip joint, the head of the bone being also changed in size and figure by disease, and thrown upon the ilium, where it sometimes forms for itself a new socket. When there is organic lesion the dislocation is readily reduced, as was the case with a man who was admitted into Guy's Hospital, with the os femoris dislocated into the ischiatic notch, and in whom the intestinum jejunum was found ruptured.

A compound dislocation is when the articulating surfaces of the bone are not only displaced, but the cavity of the joint exposed. Inflammation of the torn membranes and synovial ligament speedily succeeds; granulations spring up from the synovial membrane; the cartilages ulcerate; the bone inflames; numerous abscesses form in different parts of the joint, and, at last, granulations spring from the ends of the bones deprived of their cartilages, which generally become ossified, and the joint is anchilosed, though sometimes they remain of a softer texture, and a slight degree of motion in the joint is gradually regained. During the whole of this process great irritation is kept up, and if the patient be of a feeble constitution, the limb must be amputated to preserve his life. It is the elbow, wrist, and ankle, which are most exposed to compound dislocation; the hip is hardly ever so dislocated, and the author has seen, in his extensive practice, only one instance in the shoulder and one in the knee.

The action of the muscles is the chief power which prevents dislocation, and it is only when the violence is applied in one direction, and the muscles acting in another, that the bones can at all be displaced. A horrible instance of this power in muscles, was shewn in the execution of Damien, for an attempt to murder Lewis the XVth. Four young horses were fixed to his legs and arms, and urged to repeated efforts to dismember the criminal for the space of fifty-minutes, but without success, nor did they succeed till the executioners had divided the muscles and ligaments. In old people dislocations are rare, because the extremities of the bones in them are soft, and break, rather than suffer displacement. Persons of lax fibre, on the contrary, are

exceedingly prone to this accident, from the little powers of resistance their muscles possess. In very young persons the bones give way at their epiphises rather than be dislocated. The dislocations of the hip, which we read of in children, arise from ulceration of the cartilages and bones. A child was brought to Sir Astley, with disease of the hip, for which one of those people called bone-setters had employed painful extension. Surgeons often mistake fracture of the condyles of the os humeri in children for dislocation, from the projection which such accidents produce at the back part of the joint.

The difficulty of reduction is very little owing to the form of the bones or the cavities in which they are received, or even to the capsular ligaments; but is more owing to the peculiar ligaments, of which the author has seen instances in the knee, when any of these ligaments remained untorn. The great difficulty, however, which is opposed to reduction, arises from the contraction of the muscles, and this difficulty is greater in proportion to the length of time which has elapsed since the accident. Besides the voluntary power of muscles, which cannot be exerted for an indefinite time, they possess what is called a *vis tonica*, by which, when an antagonist muscle is divided, they pull the parts towards their insertion, and retain them in a fixed situation. Thus if the biceps be divided, the triceps keeps the arm constantly extended; if the muscles of one side of the face are paralytic, the face is permanently drawn to the opposite side; there is no feeling of fatigue from this contraction of the muscles; for if a bone be dislocated, it is drawn as far from the joint as the parts will allow, and it is fixed there by the contraction of the muscles, even until their structure becomes changed. It is the resistance thus given by the muscles, together with their voluntary contraction, which the surgeon has chiefly to counteract. Immediately after the dislocation, the resistance of the muscles is easily overcome; but after a few days the difficulty is often great, and increases daily. In a case of fracture of the thigh bone, which was speedily fatal, the ends of the bones were found over-lapping, and the muscles had acquired so rigid a contraction, that even with considerable force, and in the dead body, the bones could not be reduced to their natural position. That it is the muscles which oppose reduction may be inferred from the fact, that when the dislocation is complicated, with injury to some vital organ, slight force restores the bone to its situation. When long unreduced, however, other obstacles arise; the bone contracts adhesions to the surrounding parts; the socket is filled with adhesive matter; and a new bony socket is sometimes

formed, from which, without fracture, the head of the bone cannot be displaced.

It is generally wrong, says the author, to employ mechanical force alone for the reduction of a dislocation, as it must often be employed in a degree to occasion great injury. Bleeding is considered as by far the most efficient auxilliary, the blood being drawn from a large orifice with the patient kept in the erect position; but attention is to be paid to the constitution of the patient, in regulating the activity of this practice. Dislocation may occur in individuals, from whom the extraction of blood in sufficient quantity might be injurious, and we are then to call in the aid of the warm-bath, heated to 100° or 110°; the patient to be kept in it till fainting comes on, when he is immediately to be placed in a chair, wrapped in a blanket, and the mechanical means employed. Antimony is recommended merely to keep up the state of syncope, already produced by the bath and bleeding. By these means the tone of the muscles is powerfully overcome, and dislocation reduced with much less effort, and at a period much more distant from thea ccident than can be effected in any other way.

One great cause of failure, in attempting reduction, arises from the bone not being properly fixed in which the socket is placed. Thus, if one person pulls at the scapula and two at the humerus, the scapula is drawn along with the humerus. The extension may be made either by assistants or by a compound pulley, the latter of which, says our author, ought to be preferred in all difficult cases, because the extension can then be gradually and regularly made, and not in the violent, sudden, and often ill directed manner in which it is done by assistants. We have seen dislocations reduced with facility by suspending a weight to the limb, a method strongly recommended by Mr. Abernethy, and which appears to be at least well calculated to overcome the voluntary contraction of the muscles. In all dislocations of the hip, the pullies, according to our author, ought constantly to be employed; and also in all cases of the shoulder, when the limb has been long out. We ought always to place the limb in such a position, between flexion and extension, as to relax all the stronger muscles. "Who has not seen," says our author, "in the attempt to reduce a compound fracture in the extended position of a limb, the bone, which could not be brought in apposition under the most violent efforts, quickly replaced by an intelligent surgeon, who immediately directed the limb to be bent, and the muscles to be placed in a comparative state of relaxation?"

It is generally best to apply the extension to the bone which

is dislocated, although, in dislocations of the shoulder, the author places his heel in the axilla, and draws the arm by the wrist, in a line with the body, by which the pectoral and latissimus dorsi muscles are relaxed. Boyer always prefers applying the extension to the limb below. After reduction by the pullies, we are told that the bone requires, for some time, to be kept in its situation by means of bandages. The limb ought to be preserved in a state of absolute rest till the ruptured ligaments are united. Pouring cold water upon the limb, and subsequent frictions are useful in restoring the tone of the overstretched muscles. All attempts to reduce dislocations of long standing in robust people are hurtful, often unavailing; and, even when the bone is replaced, it is often rather an evil than a good, from the violence of the extension. Very good use of the arm is often recovered although the head of the bone remains in the axilla.

"I am of opinion that three months for the shoulder, and eight weeks for the hip, may be fixed as the period, from the accident, at which it would be imprudent to make the attempt at reduction, except in persons of extremely relaxed fibre, or such as are at an advanced age." The author is aware that dislocations have been reduced at four and even six months from the injury, but excepting in very emaciated, relaxed, and old people, the injury done in the extension is greater than the advantages derived by the reduction. After three months it is seldom that the use of the limb is increased after reduction. This ought to be fairly represented to the patient; and then only at his request ought the attempt to be made, and that gradually and without violence.

The THIGH BONE may be dislocated in four directions:—upwards upon the dorsum ilii; downwards into the foramen ovale; backwards and upwards into the ischiatic notch; forwards and upwards upon the body of the pubes. A dislocation downwards and backwards, as described by some surgeons, Sir Astley has never had an opportunity of observing; he therefore doubts if such dislocation ever occurs. In the dislocation upwards, which Sir Astley thinks occurs in twelve cases out of twenty of dislocations of the hip, the limb is shortened from one inch to two and a half inches; the great toe rests on the tarsus of the other foot; the knee and foot are turned inwards, the former being a little advanced upon the other knee; abduction of the limb is impracticable, but the limb can be slightly bent across the other; the head of the femur, if not concealed by extravasation of blood, may be felt moving on the dorsum of the ilium when the knee is rotated inwards; the trochanter is advanced

towards the anterior superior spinous process, and is less prominent than in the opposite hip. In a severe and recent injury of the hip joint then, the surgeon looks for a difference in the length of the limb, a change of position inwards, diminution of motion, and decreased projection of the trochanter. If the neck of the thigh bone is fractured the knee and foot *generally* are turned outwards; the trochanter is not drawn upwards but backwards; the thigh can be bent, though with slight pain, upon the abdomen; but what is chiefly to be attended to is that the limb, which is shortened from one to two inches, may be made of the length of the other by slight extension, and when the extension is abandoned the leg is directly shortened; when rotated, crepitus is felt in the extended but not in the contracted state of the limb. This last accident occurs rarely, except in old people, and generally from the most trifling cause. Compared with dislocation it is of very frequent occurrence.

The muscles which, more than others, resist the reduction of dislocation upwards, are, the glutei and triceps; the quadratus, gemini, and obturator internus, are put upon the stretch. Sir Astley's mode of reduction is as follows:—He takes from twelve to twenty ounces of blood, or more if the patient be a strong man, and then puts him in a bath heated to from 100° to 110°, and while there, gives him a grain of tartarized antimony every ten minutes, until nausea is produced. The patient is then placed upon his back on a table covered with a thick blanket; the pelvis is fixed by means of a strong girt passed between the thigh and scrotum, which is made fast to a staple in the direction in which the extension is to be made. To make extension a linen roller is applied tightly above the knee, a leather strap is buckled over it, and to each side of this the cord of the pullies is fastened. The knee is bent, but not to a right angle, and brought a little over the other thigh. The pullies are fastened to another strap in the direction in which the limb is now placed; the surgeon tightens them slowly till the patient complains, he then rests a little till the muscles relax; again he renews the extension, and again rests till he has drawn the head of the bone to the lip of the acetabulum; the pullies are now entrusted to an assistant, with directions to preserve the same degree of extension, and the surgeon rotates gently the knee and foot, during which the bone slips into its place, but generally without a snap, as the muscles have not sufficient tone remaining to act forcibly. The surgeon only knows that reduction is effected, by loosening the bandages and comparing the limbs. If the bandages get loose during the operation, no time should be lost in re-adjusting them, that the muscles may have time to recover

as little of their tone as possible. It may be necessary, in some cases, to lift the bone over the lip of the acetabalum, by passing a towel under the limb and causing an assistant to raise it. Great care is necessary in removing the patient to bed.

Thirteen cases of dislocation of the hip upwards, are detailed; all exceedingly instructive. The first was unsuccessfully attempted to be reduced without pullies; and the man, who is a labourer, was thus rendered incapable of earning his livelihood. There can be no doubt that the proper application of pullies would have reduced the limb. It is now nine years since the accident, and the patient cannot stoop without extreme difficulty: he was long compelled to use crutches, though he now manages to walk about with two sticks. This man was 62 years of age when the accident happened. In a case related by Mr. North, reduction was not attempted till nearly a month after the accident. The limb was shortened fully *three* inches. The pullies were employed, and before extension was begun two grains of tartar emetic were given, and repeated at the end of every ten minutes to the fifth time, without occasioning much nausea. The patient was then bled to *sixty* ounces, without syncope; the extension was kept up for two hours, with all the force which one man on the pullies could employ, before it could be reduced. In another cure Sir Astley himself attempted reduction at a month from the accident; he applied the pullies in every possible direction; but, having used no constitutional measure, the limb was not reduced. These cases ought to be studied with care by every surgeon who is desirous of becoming master of this most important branch of his profession. In one case, admitted into Guy's Hospital, the bone was not only dislocated but fractured about its middle —a most troublesome complication, and seldom, in our authors' opinion, admitting of reduction. In the case alluded to the dislocation was not reduced.

When violence is applied while the thighs are widely separated, the head of the bone is forced downwards into the FORAMEN OVALE, and the ligamentum teres and capsular ligament are torn through. The limb is lengthened two inches. In these cases the head of the bone may be felt towards the perineum; the trochanter major is less prominent; the body is bent forward, owing to the contraction of the iliacus internus and psoas muscles; and if the body be erect the knee is thrown forwards; the knee itself is widely separated from the other, owing to the extension of the glutei and pyriformis muscles; but the foot is generally neither turned outwards nor inwards, so that our chief diagnostic marks are the bent position of the body, the

separated knees, and increased length of the limb. The head of the bone is below and a little anterior to the axis of the acetabulum, and a hollow is perceived below Poupart's ligament. In a preparation of this accident, in the collection at St. Thomas's Hospital, the head of the thigh bone rests upon the foramen ovale; the obturator muscle and ligament were completely absorbed, the foramen being filled by bone; and a bony deposit, forming a deep cup, was found around the foramen, into which cup the head of the bone was received in a manner to allow of considerable motion, but from which it could not be displaced without fracturing the edge of the new socket. The inside of this cup was smooth. The acetabulum was half filled by bone. The head of the thigh bone was still covered by its articular cartilage, the ligamentum teres was torn through, and the capsular ligament partially ruptured; the pectinalis and adductor brevis muscles had been lacerated but were united by tendon; the psoas, iliacus internus, glutei and pyriformis were all upon the stretch. We conceive this to be a most interesting preparation, shewing the astonishing resources which nature possesses in compensating for injuries.

The reduction of this dislocation is easy. If recent, all that is necessary is to place the patient upon his back, separate his thighs to the widest, pass a girt between the pudendum and thigh, fixing it to a staple in the wall, while the surgeon grasping the dislocated limb by the ankle, draws it across the sound leg, when the bone slips into the socket; or the thigh might be fixed by a bed post between the scrotum and upper part of the limb, and the leg then carried inward across the other. In general, however, it is necessary to fix the pelvis by passing a girt round it, and through the other girt which is fixed to the thigh. In old cases we are recommended to place the patient upon his sound side, and to fix the pelvis with a bandage, whilst another is passed under the top of the dislocated thigh, to which the pullies are affixed perpendicularly; by this means, the top of the thigh is drawn upwards, while the surgeon presses down the knee and foot, the limb being thus used as a lever. A gentleman was thrown from his horse and received a contusion upon the head, and dislocation of the thigh bone into the foramen ovale. No attempt was made to reduce the dislocation. Many months after, when the author saw him, the thigh was longer than the other, by the length of the patella, and the knee advanced forward. The toes were rather everted. The head of the bone could not be felt, and the great trochanter was much less prominent than usual. In progression, the knee being bent and the body thrown forward, he rested upon his toe and halted

exceedingly. At first, the toe could with difficulty be brought to the ground, but he improves in walking, and there is now little pain in the joint, unless when he supports the body upon that limb alone. No attempt was made at reduction. An interesting case, communicated by Mr. Daniell, is detailed, in which reduction was accomplished between two and three weeks after the accident. In reduction, great care must be taken not to advance the leg in any considerable degree, otherwise the head of the bone may be forced into the ischiatic notch, from which it can never afterwards be removed.

Dislocation BACKWARDS into the ISCHIATIC NOTCH, is both difficult to detect and to reduce; to detect, because the length of the limb and its position as regards the knee and foot are but little changed comparatively with the dislocation upwards; to reduce, because the head of the bone is placed deep behind the acetabulum, over the edge of which, it requires to be lifted as well as drawn towards the socket. The limb is generally shortened not more than half an inch; the trochanter is behind its usual place, and inclines slightly towards the acetabalum; the head of the bone can only be felt in very thin people; the knee and foot are slightly turned inwards, so that the toe rests upon the ball of the opposite great toe; when the patient is standing, the toe, but not the heel, reaches the ground; the knee is a little forwards and slightly bent; and the limb is so fixed that flexion as well as rotation are in a great degree precluded. There is a specimen in the collection at St. Thomas's Hospital, in which the acetabulum is filled with ligamentous substance; the capsular ligament is torn at its anterior and posterior junctions with the acetabulum; the ligamentum teres is broken, an inch of it still adhering to the head of the bone; the head of the bone rests upon the pyriformis muscle above the sacro sciatic ligaments; the muscle is wasted, and although no attempt has been made to form a bony cavity, a new capsular ligament passes over the articulatory surface of the bone formed of condensed cellular substance, and containing within its cavity the broken ligamentum teres. Nothing is known of the history of this dislocation, but it must have existed for years: the adhesions were too powerful to admit of reduction; and if reduced, the head of the bone could not have been received into the acetabulum.

This dislocation occurs most readily when the abdomen is bent upon the thigh, or the thigh bent at right angles with the abdomen, and the knee violently pressed inward. For reduction, the patient is to be laid on the sound side, and the thigh bent to nearly a right angle with the abdomen. The pelvis is

then to be fixed by a girt, passed between the scrotum and thigh, and carried backwards in the line of the thigh, to a staple fixed behind the patient. A wetted roller is to be applied above the knee and the leather strap over it, to which the pullies are applied by a strap from each side. As extension is going on, the top of the bone must be raised by means of a towel or bandage passed under the thigh. The assistant who manages this towel may pass it over his shoulders, and rest his hands on the patient's pelvis, which will enable him considerably to increase the force which he applies. In one case which Sir Astley reduced, ten days after the accident, he believes he should not have succeeded but for attention to two circumstances. The pelvis advanced with the strap which confined it, so that he was obliged to cause the patient to bend his body forwards to preserve the thigh nearly at right angles with the trunk, and the extension might have been continued for any length of time without the limb being reduced, had not one of the assistants been directed to rotate the limb inwards. We are reluctant to pass over the detailed cases of this accident, each of which contains some important lesson, but we must confine ourselves chiefly to the didactic matter of the author.

In the dislocation backwards and downwards, as described by some authors, but of the existence of which Sir Astley entertains a well founded doubt, the head of the bone is still described as being in the ischiatic notch, and the limb as being elongated. This error must have arisen from an examination of the pelvis separately, for in the conjoined state, the notch is *above* the centre of the acetabulum, and consequently the limb, when the head of the bone is displaced into this notch, is shortened, not lengthened.

A dislocation upon the os PUBES is easily detected. A person's foot while walking slips unexpectedly into a hollow, and the body being bent back, the head of the thigh bone is thrown forward. The limb is shortened one inch, the knee and the foot are turned outwards, and cannot be rotated inwards though there is slight flexion forwards and outwards; but the distinguishing mark is, that the head of the thigh bone may be felt upon the pubes, above the level of Poupart's ligament. Though so easy of detection, yet have three cases come within the author's knowledge, in which the nature of the accident was not ascertained till too late to attempt reduction. Nothing but the grossest neglect and carelessness on the part of the surgeon can occasion this error.

In dissecting an accident of this kind the acetabulum was found partially filled with bone, and in part by the trochanter

major. The capsular ligament extensively lacerated, the ligamentum teres ruptured. The head and neck of the bone passed beneath the tendons of the psoas and iliacus externus muscles, elevating them and putting them on the stretch; the crural nerve passed on the fore part of the neck of the bone, upon the iliacus internus and psoas muscles. The head and neck of the bone were flattened, and above the level of the pubes, upon which a cup was formed, which embraced the neck of the bone locking it in certain directions to the pubes, while Poupart's ligament confined it in front. On the inner side passed the femoral vessels. The plates representing this, and the preparations of the other dislocations of the hip joint, which had been unreduced, exhibit, in the most clear and beautiful manner, the nature of these accidents and also the powers of nature in accommodating herself to new circumstances.

In reduction, the patient is to be placed upon a table on the sound side, and the thigh carried considerably backwards. The pelvis is to be fixed in the usual way, by a girt passing between the thigh and pudendum, and fixed in a staple considerably in front of the line of the patient, but corresponding with the direction of the thigh. The pullies are fixed above the knee as in dislocation upwards, and the extension is made in a line behind the axis of the body, the thigh being drawn backwards. While the extension is making, an assistant raises the head of the bone by means of a towel passed under the thigh. In a case sent to the author by Dr. Gaitskill, then a dresser at Guy's Hospital, the extension was first made in a straight line with the body, without success. When extension was about completed in a line backwards, and Dr. Gaitskill had raised the head of the bone, by means of a towel passed under the thigh and across his own shoulders, the reduction was facilitated by one of the dresser's raising the ankle, and depressing the knee. The relative proportion of cases, according to the author, is twelve in the dorsum ilii, five in the ischiatic notch, two in the foramen ovale, and one in the pubes.

It is singular that Mr. Sharpe, formerly surgeon of Guy's Hospital, author of a treatise on surgery, and a skilful and experienced surgeon of his time believed, that dislocation of the thigh bone never occurred. The difficulties which then existed to the study of anatomy, especially morbid anatomy, is doubtless the cause why such accidents escaped the notice of the older surgeons.

A case is detailed, which occurred in the practice of Mr. Todd, professor of Anatomy in Dublin. A robust young man fell from a height, fractured his skull, and dislocated his thigh upwards and

backwards. The dislocation *was reduced without difficulty*, but the man continued comatose, and died within twenty-four hours. Between the gluteus maximus and medius, there was a large cavity filled with blood, and into which the extremity of the femur had been received. The pyriformis, gemini, obturatores, quadratus, and some fibres of the pectinalis were completely torn across. The orbicular ligament was irregularly lacerated, posteriorly and superiorly, and the inter-articular ligament, was torn out of the depression on the head of the femur, and remained attached to the acetabulum. A singular case is taken from one of the medical journals. At first the accident was treated as a fracture of the neck of the thigh bone, but afterwards several attempts were made unsuccessfully to reduce it. A year after the accident, the patient applied to Mr. Cornish, of the Falmouth Dispensary, with the limb shortened two and a half inches; the knee and foot turned inwards; considerable distortion about the joint; and great pain on bringing the foot to the ground. In short, the limb was almost entirely useless. *Five years after the accident* this person being at sea in a coasting vessel, the ship made a lurch and he was thrown from his birth. At the momemt he fell, he heard a loud crack in the hip; but from that time he put aside his crutches, and recovered the perfect use of this limb—altogether a singular case, and shewing how easily reduction takes place, when the muscles are thrown off their guard.

We are apt to confound FRACTURES of the OS INNOMINATUM with dislocations, and, consequently, to aggravate the sufferings of the patient, and to hasten his death by trying unnecessary extension. When the fracture is through the acetabulum, the head of the bone is drawn upwards, and the trochanter forwards, so that the limb is shortened, and the knee and foot turned inwards: such a case may be mistaken for dislocation into the ischiatic notch. If the os innominatum is disjointed from the sacrum, and the pubis and ischium broken, the limb is slightly shortened, but the knee and foot are not turned inwards. Of the first of these accidents the author has seen two examples; of the latter, only one. They may be detected by a crepitus being perceived on the motion of the thigh, if the hand be placed upon the crista of the ilium; there is more motion than occurs in dislocations.

A hogshead of sugar fell upon a man, and the surgeon to whom he was taken, made slight extension to lengthen the limb, during which crepitus was felt. The man died in the evening. The posterior part of the acetabulum was broken, allowing the head of the thigh bone, to slip from the socket; the fracture extended from the acetabulum, across the os innominatum to the pubes; the ossa pubis were separated nearly an inch at the symphysis;

the illia were separated on each side, and the pubes, ischium, and ilium of the left side broken; there was a pint of blood in the abdomen, and the left kidney greatly bruised. In another case, admitted into St. Thomas's, the appearances were those of a dislocation backwards. The man lived four days. The fracture passed through the acetabulum, dividing the bone into three parts, and the head of the thigh bone was deeply sunk into the cavity of the pelvis. A most interesting case is next given, but we have not space for the details. The patient, a woman, lived sixteen days. She had been bruised between the wheel of a waggon and a post. There was extensive ecchymosis of the one side, and the parts sloughed. The body of the pubis, and ramus ischii of the left side, were fractured. The sacro-iliac symphisis of the right side was torn asunder, the left also separated, so as to admit the handle of a scalpel. The ligaments and cartilage of the symphysis pubis were torn, &c. and blood effused behind the peritoneum.

The author has known three instances of fractures of the os innominatum to get well. Two of these were fractures of the ilium, and crepitus was perceived on moving the crista of the ilium; the third was a fracture of the junction of the ramus of the ischium and pubes. In the two first, a circular roller was applied round the pelvis, but no bandage was used in the latter. The patients were bled freely.

When the NECK or upper part of the THIGH BONE IS FRACTURED, it is apt to be confounded with dislocation, and indeed the discriminating marks are confessedly often exceedingly obscure. There are three species of fracture here, which require to be distinguished; that through the neck of the bone within the capsular ligament, that of the neck, where it joins the great trochanter externally to the capsular ligament, and lastly, fracture of the trochanter major itself, beyond its junction with the cervix femoris. In the first, the limb is shortened from one to two inches, and the trochanter is drawn upwards. The limb may be easily extended to the proper length, but it is immediately retracted by the muscles, until they acquire a fixed contraction, when the limb cannot be lengthened. The strong rotating muscles of the thigh turn the knee and foot outwards. It is not till some hours after the accident, that these symptoms acquire their decisive character; hence patients, even in hospital practice, are sometimes subjected to painful extension, on the supposition that the injury is a dislocation. We are recommended after examining the patient in the recumbent, to examine in the erect posture, having him supported by an assistant. The toes, in this position touch the ground, but the heel does not; the knee and foot

are everted, and the prominence of the hip diminished. When the patient tries to bear his weight upon the limb, he feels acute pain from the psoas, iliacus, and other muscles being put upon the stretch, and from the broken bone pressing against the internal surface of the capsular ligament. Crepitus may be felt as in other fractures, though not invariably, by extending the limb to its proper length and rotating it inwards.

This accident occurs most frequently in women, especially the old, from the more horizontal position of the neck of the bone, and from the comparative feebleness of the female constitution. The circumstance of this fracture rarely occurring under fifty years of age is strongly diagnostic. It is known that the bones in old age become less resisting, and the neck of the thigh bone in particular, is often changed, both in its length and the angle which it forms with the shaft by interstitial absorption. Hence, from the bones in old age becoming thin in their shell, and spongy in their texture, the same violence, which at a more robust age would have dislocated the bone, now fractures it. The author particularly adverts to the slight causes which may often produce this accident, that the young surgeon may be aware how an accident, so serious, may arise from so slight a cause as a fall in the street for instance. A woman had the neck of her thigh bone fractured, from something catching her foot whilst she was suddenly turning round.

Sir Astley's experience, together with the result of many interesting experiments, made with a view to ascertain this point, lead him to believe that the dislocation we are speaking of, never, or at least but rarely, unites by bone. This is an interesting subject, and well merits the great attention which the author has given to it. No doubt he must have been aware that though the head of the fractured bone is nourished by only a few small vessels, from the ligamentum terres, that yet it might possess, in Mr. Hunter's strong and clear language, sufficient vitality to accept of the union. We certainly incline to think that if the fractured extremities could be placed in accurate apposition and absolute freedom from motion attended to, that a bony union might form; and we believe that the want of success arises from the difficulty of having these conditions accurately complied with. It is of consequence to decide whether bony union is possible, or whether the want of success may not be owing to the difficulties of putting the fractured extremities in a proper position, and maintaining them in it. The author ascribes considerable weight to the difficulties of getting the bones into accurate apposition, and to this we are disposed to attach more weight, than to the two other causes which he

assigns, namely, want of pressure of the one extremity of the bone against the other, and want of ossific action in the separated head. It is the last reason, however, which the author considers to be the chief cause why a bony union does not take place. If we attend to the action of the muscles upon the great trochanter, tending to separate the divided extremities from one another, and the almost insurmountable difficulty of preserving the limb, for the due space of time in one position, we may see cause why this union by bone so seldom takes place in the fracture of the neck of the thigh bone. The want of pressure of the two extremities, clearly arises from the same causes, and doubtless, some share of the want of success may be attributed to this also. The head of the bone, it is true, derives its nourishment chiefly from the periosteum of the cervix, and as this is rarely undivided in fracture of the cervix, the chief source of nutriment to the head of the bone is cut off. But we can here only repeat what Mr. Hunter has so happily illustrated by experiment, that much vitality is not necessary to enable a part to accept of a union, and the smaller that part is, the more readily will this event take place.

On dissection, the head of the bone is found in the acetabulum. The portion of the neck adhering to the trochanter, is in great degree absorbed, and this portion produces by attrition, a hollowing of the head or cervix attached to it. The capsular ligament is thickened; and the synovial membrane in a great degree, not only where it lines the capsule, but where it is reflected over the cervix, as far forwards as to the fracture. Synovia with serum is poured into the joint, which is absorbed, as the inflammation and irritation abate, and ligamentous substance is deposited, which, so far as the author's extensive opportunities of observing go, always constitutes the connecting medium. In the experiments performed upon rabbits and dogs, it was found that the phenomena were similar to what occur in man; but when the bone was fractured longitudinally, and in part external to the capsular ligament, *bony union* to a small extent took place.

From dislocation into the foramen ovale, and upon the dorsum ilii, this fracture may be distinguished by the eversion of the foot and mobility of the limb; in dislocation upon the pubes, the head of the bone is felt in the groin, which always forms a clear and distinguishing sign. From fractures external to the capsular ligament, it may be known by the great shortening of the limb, the absence of crepitus, unless when the limb is elongated, and rotated; the slight causes which produce the almost entire absence of local or constitutional irritation, and the great age of the patient.

Observe what the experience of Sir Astley establishes, regarding the cure.—"I have been baffled at every attempt to cure, and have not yet witnessed one single example of union in this fracture." An intelligent surgeon, visiting one of the continental hospitals, was thus addressed—"some of you English surgeons do not believe that we unite fractures of the neck of the thigh bone; now there is one you shall examine, as the patient is dying." The joint was examined, but the fracture was found still disunited. The boastful surgeon only gave a shrug of disappointment. If the periosteum of the cervix, however, be not torn through, or if the head be broken, and the cervix still remains in the acetabulum, union may be produced, but in neither of these cases is the limb shortened.

"If I sustained this accident in my own person," says the author, "I should direct that a pillow should be placed under the limb throughout its whole length, that another should be rolled up under the knee, and that the limb be thus extended for ten days or a fortnight, until the inflammation and pain have subsided. I should then daily rise and sit up in a high chair, in order to prevent a degree of extension that would be painful." Patients ought, in a few days to be allowed to walk with crutches, for which a stick may after a while be substituted; in a few months no support is necessary.

In fracture, EXTERNAL to the CAPSULAR LIGAMENT, the limb is but little shortened, the foot is everted, much pain is felt in the hip and top of the thigh inside, the hip looses its roundness, but what chiefly distinguishes it from the former, is its occurrence under fifty years of age, seldom is it met with at a later period; it is produced by severe injuries, only such as falls from a height, and carriages passing over the pelvis; there is crepitus upon slight motion, and without elongating the limb; the sufferings of the patient, especially on motion, are acute, from the broken extremities of the bone rubbing against the muscles; the thigh and leg are swollen; there is high irritative fever; and months elapse before the patient recovers any use of the limb. Though the limb is usually little retracted, yet this circumstance depending upon the degree of obliquity in the fracture, and laceration of the surrounding parts, it is sometimes, though rarely, shortened more than an inch. The seat of this fracture is found to vary considerably, though it is usually at the root of the cervix. It is singular that in the three cases detailed, the age of each patient was above sixty:—in one upwards of eighty three, the neck of the bone was fractured at its junction with the body, and driven into the cancelli between the two trochanters; and what was very curious, an addition was made to the trochanters by which

means they rested upon the acetabulum, thus giving an opportunity for supporting the weight of the body. Mr. Wray's patient, aged 64, died on the fourth day, in consequence of the irritative fever produced by the accident. There was great extravasation of blood between the muscles, suppuration had began near the trochanter major, and the neck was received into the cancellated structure of the shaft of the bone. In one case the head and neck formed one portion; the trochanter major a second; the trochanter minor, also fractured, a third; and the body of the bone a fourth; and these parts had all united by bone, though not quite in the natural position, and with very little shortening of the thigh.

The double inclined plane is recommended for the cure of this fracture, and a splint on the outside of the thigh, extending beyond the trochanter major; and it is to be firmly fixed by a leather belt round the pelvis, so as to press one portion of bone to the other; the splint is to be fixed also at the knee. In this position the limb is to be kept steady for eight weeks, when the patient may be permitted to rise, if the attempt does not give him pain, but he must wear the splint with the straps for a fortnight longer. Making the sound limb the splint, by which to keep the fractured one from retracting, also succeeds, together with a belt round the pelvis, to press the fractured extremities together.

When the TROCHANTER MAJOR is fractured, the limb is a little, sometimes not all, shortened; the foot is benumbed, the patient sometimes cannot turn in bed without assistance, or the attempt gives him pain; the trochanter is generally widely separated from its natural situation, sometimes drawn forwards towards the ilium, at others falling downwards towards the tuberosity of the ischium; the foot is greatly everted; and the patient cannot sit without excessive pain. This fracture unites firmly and speedily, and good use of the limb is restored. A girl, aged sixteen, fell upon her hip on the edge of the pavement, and in four days applied for admission into Guy's Hospital, when the constitutional symptoms being severe, she was placed under the physician. The limb was everted, and appeared half an inch elongated. It admitted of passive motion in all directions, but abduction gave great pain, and she had no command over the rotators inwards. As she had walked both before and after admission, it was doubted if the cervix femoris could be fractured, and the closest examination of the trochanter and body of the bone could not detect the least *crepitus* or *displacement.* She died some days after the accident. There was no swelling, nor could the slightest crepitus or displacement be yet felt. Matter had formed towards the trochanter minor. The bone was now dislocated, and not till then was

it discovered that the great trochanter was fractured at its root. The tendons of the lesser glutæi and commencement of the vastus externus, attached to the outer side of the process being untorn, so completely confined the fractured trochanter in its place, that even when the head of the bone was dissected from the body, motion was allowed only in one direction.

When the thigh bone is fractured just below the trochanters, the contraction of the iliacus internus, and psoas muscles, pulls the broken bortion forwards and upwards, so as to form nearly a right angle with the body. Union consequently takes place, with great shortening of the limb, and a hideous projection forwards. Pressure upon the projecting bone, only adds to the patient's suffering, and is quite incapable of preserving the bone in its proper situation. The knee must be elevated over a double inclined plane, and the patient kept in the sitting posture well supported by pillows during the cure. The degree of elevation of the body must be regulated by the approximation of the fractured extremities of the bone,—this position is necessary to relax the psoas and iliacus muscles. It is only in this way, says our author, that great deformity can be prevented. When all projection of the upper portion is thus removed, we are recommended to buckle a strong leather belt, lined with some soft material, round the limb.

It is with regret we must pass over for the present, the clear and satisfactory account of dislocations of the knee, ankle, &c. as we would willingly confer upon our readers a small share of the satisfaction which we have derived from going over these subjects with the author; but our limits do not permit it. We must, therefore, pass on to the concluding article of the volume, namely, injuries of the spine; confessedly a subject of great importance to the profession, as well from the serious nature of such accidents, as from the doubtful nature of the practice to be adopted in many instances.

DISLOCATION, according to our author, never occurs IN THE SPINE, at least in all the numerous instances in which he has inspected the bodies of those who have died of injury of the spine, he found fracture and displacement. Still the possibility of dislocation of the cervical vertibræ, from the greater obliquity of their articulatory processes is not denied. The first accident taken up isconcussion, which may be produced by blows or great violence suddenly bending the spine, to which succeeds paralysis of all the parts beneath, from which, however, recovery gradually takes place. A log of wood fell upon a man's loins. He was nearly deprived of the motion of his lower limbs, and their sensibility was greatly impaired. He was cupped, purged with calomel,

blistered, and had a discharge kept up from the loins for three weeks. The limbs were rubbed with stimulating liniments. In six weeks he had nearly recovered. He was then submitted to the influence of electricity, and in ten weeks his cure was completed. The utility of the stimulating liniment and electricity, may, we think, be very much questioned.

A blow upon the vertebræ may occasion extravasation of blood upon the spinal chord itself, though more frequently it takes place upon the sheath. A boy, upon a swing, had the whole of the cervical vertebræ violently strained. No bad effects immediately resulted, but the boy afterwards became dull, forsook his play, and gradually became weak and powerless. He was brought to London ten months after the accident, with severe and frequent pain in the back of the neck, and occasionally, slight in the head. The muscles of the hind head, and neck, were stiff, and painful to the touch, and on motion. He had little voluntary power of motion in the limbs. Blisters, setons, and mercury were used without much effect. The boy died a year after the accident. On sawing out the posterior parts of the cervical vertebræ, the theca was found overflowed with blood, which extended between the theca and bony canal, from the first vertebra of the neck, to the second of the back, both included.

Fracture of the vertebræ, without displacement, often produces extraordinary symptoms and even sudden death. A woman in the venereal ward of St. Thomas's, while at dinner, fell suddenly forward, and on being raised was found dead. The dentiform process of the second vertebra had been broken off, and the head falling forwards, the root of the process was forced back upon the spinal marrow. Mr. Cline was consulted in the case of a boy three years of age, who, by a fall, injured the neck, after which he was obliged to walk carefully upright, as a person carrying a weight on his head; and when he wished to examine objects on the ground, he supported his chin upon his hands, gradually lowering his head; but if the object was above, he put his hands to the back of the head, and so regulated its motions. Any shock caused great pain, and obliged him to support his chin with his hands, his elbows resting upon a table He died a year after the accident. The atlas was found fractured, so that the dentiform process of the second vertebra, having partly lost its support, was apt to compress the spinal marrow in different inclinations of the head; and nature led him instinctively to aid with his hands the muscles of the neck, during the various motions and positions of the head.

A portion of spinous processes may be broken off, but the spinal marrow is unaffected unless there has been considerable

concussion. A boy supported a heavy wheel, by putting his head through the spokes, but it over-balanced him and he fell, bent double; so that when brought to the hospital he had the appearance of one who had long suffered from distorted spine. The injury had produced no paralysis; three or four spinous processes were fractured and drawn obliquely to the one side. He speedily recovered without any particular attention, but he remained deformed.

FRACTURE with DISPLACEMENT above the third cervical vertebra is immediately fatal if the displacement be to the usual extent, because the phrenic nerve is involved in the paralysis, and the diaphragm consequently ceases to act. In the same accident, below the third cervical vertebra, death occurs at various periods of the injury; and the effects of such injury vary according as the fractured vertebræ are nearer or more remote from the head. If a lumbar vertebra be displaced, the lower extremities are insensible to burning or pinching, and the will of the patient has no power over the muscles. The sphincter muscles of the rectum and the bladder are paralysed, so that the fœces pass off involuntarily and the urine requires to be drawn off. The circulation, though languid, continues, and is sufficient to preserve the heat of the limbs. A blister applied will still inflame, vesicate, and heal, though it produces no feeling to the patient. The patient generally dies within a month or six weeks from the accident, the urine for sometime passing off involuntarily. One patient lived two years after the accident, and then died of gangrene of the nates.

If the fracture and displacement, be of the dorsal vertebræ, the symptoms do not vary much from the above; the paralysis extends higher up, and the abdomen is excessively inflated. The patient, usually, does not survive the accident above a fortnight or three weeks, though in one case, the person lived nine months. Of course, death will occur sooner or later, according as the injury is nearer or more distant from the neck, and according to the degree of displacement and consequent injury of the marrow.

In fractures of the cervical vertebræ below the origin of the phrenic nerve, in addition to the symptoms already mentioned, the arms are paralysed; if as high as the fifth vertebra, completely so; but if the fracture be only of the sixth or seventh, some power of motion remains. If the fracture be oblique, one arm may be more affected than the other. Respiration is difficult, and wholly dependant on the diaphragm, as the intercostal muscles cease to act. Death ensues from the third to the seventh day, according as it is the fifth, sixth, and seventh

vertebra which is injured. On dissection, the spinous process of the displaced vertebra is found depressed, the articular processes are fractured, and also the body of the vertebra, for rarely does the displacement happen at the intervertebral substance; the body of the vertebra is usually advanced from half an inch to an inch; and between the vertebra and sheath of the spinal marrow, blood is extravasated, or the extravasation may be on the chord itself. In slight displacement, the spinal marrow is compressed and bruised, but it is torn quite through when the displacement is great, though the dura mater remains entire, and a bulb forms upon the lacerated ends of the marrow.

A man had his spine broken at the lower dorsal, or first lumbar vertebra. Cure was attempted by preserving the spine in a state of absolute rest; the patient was placed on a fracture bed, which permitted him to evacuate the fœces without disturbance, and the urine was regularly drawn off. After some weeks, the bladder could retain a pint and a half of urine, and this could be discharged voluntarily. At the end of six months, the back was straight, flexible, and as strong as ever; the urine could be retained and passed at pleasure, though, perhaps it was expelled chiefly by the abdominal muscles; the bowels were moved every third or fourth day; health and spirits good; but there was neither sensation nor voluntary motion in the lower extremities. He died in a year, from disease of the tuber ischii. The bodies of the first and second lumbar vertebra were found to have been fractured; the first had advanced; the second had been drawn backwards. The fracture was united by ossific matter, which had spread over the fore part of both vertebræ, and a little had been deposited on the dorsal vertebræ The spinal canal was diminished by a piece of bone being forced into it from the first lumbar vertebra, which had split the theca, and divided the marrow, a bulbous projection of it appearing above and below the bone, which were nearly an inch apart.

From this case, and others, it is clear that rest allows of ossific union, but this is not enough to save the patient, unless the pressure upon the spinal marrow be removed. Mr. Henry Cline considered this as an accident the same in its nature with depression of the cranium, and requiring the same kind of treatment. In one case, he laid the patient upon his breast, made an incision upon the depressed bones, raised the muscles, applied a small trephine to the arch of the vertebra on either side, so as to remove the spinous process and the arch of the bone which pressed upon the marrow. The case did not succeed; yet, was Mr. Cline justified in trying the operation from the universal fatality, which attends such

cases under the usual treatment. Since the publication of the present volume, this operation has been performed by Mr. Tyrrel, of St. Thomas's Hospital. The operation was performed forty eight hours after the accident; the arches of two of the vertebræ, we believe the first lumbar, and last dorsal, were removed: the operation was so far satisfactory, that the patient had more feeling in the extremities after it; he died upon the twelfth, or fourteenth day of violent abdominal inflammation, which seemed to have had its origin in the bladder. The result of this case is, we believe, generally allowed to be in favour of operating in such cases. It is hoped that the abilities and professional zeal of Mr. Tyrrel may induce him to give the particulars of this interesting case to the public. Sir Astley, speaking of Mr. Cline's case, is not sure that such operations would be ultimately successful.

In one case, a severe injury of the spine was followed by inflammation and ulceration of the spinal marrow. After a time there was sudden pain in the back, paralysis of the lower extremities, retention of urine, and involuntary discharge of fœces. Towards the close of this patient's existence, there was pain and distention of the upper part of the abdomen, anorexia, fever, and profuse perspirations. On opening the spinal sheath a milky fluid was found within it, just above the cauda equina, and for the space of three inches higher up; the spinal marrow was ulcerated to a considerable depth and softened into the semifluid state which the brain assumes from putrefaction. This affection is analagous to the *ramollissement du cerveau* of French authors. *(For an account of which see present number, article, Apoplexy.)* The bladder was found much inflamed and enlarged. The inflammation in such cases, ought to be prevented or subdued by cupping or leeches, blistering, issues &c.

Of the merits of this work, alike creditable to the author and to his country, it is unnecessary for us to say much. Every symptom is detailed from the careful examination of numerous cases; the author seems to have lost no opportunity of ascertaining by post mortem examination, the nature of the different accidents of which he treats, and the reparatory processes which nature sets on foot for remedying them. In deducing sound practical rules from these, and other sources of information, the hand of a master is everywhere apparent.

Wallace and Coyne on Vapour Baths, and Fumigations.*

The utility of medicated applications to the skin in the form of vapour, has, of late years, been very generally recognized. This is principally to be attributed to the exertions of M. Galés, at the Hospital St. Louis, in Paris, and of M. de Carro, at Vienna. In our own country, it must be allowed that we have been rather backward on this point, but the establishment of Institutions for the treatment of diseases of the skin, in London and Dublin, and the publication of treatises, such as those which head our present article, seem to show that the impulse has been given, and that we may expect much novel information on the subject. Their utility, however, still remains *inter dubia.*

The object of Mr. Wallace, in his first publication, seems to have been the laudable one of diffusing among the profession in this country, a more general knowledge of what had been done on the subject abroad. His attention, which he tells us, had been early directed to cutaneous diseases, was more particularly fixed on it when he became surgeon to an institution, of which he was among the first promoters,—the Dublin Infirmary for curing diseases of the skin. With these views he has given a detail of the exertions of M. Galés, which appear to have commenced in 1812, and were principally directed towards the investigation of the causes of scabies, and the most successful method of treating it. His experiments led him to the preference of sulphur, applied in a state of vapour: he found it successful beyond expectation, although the apparatus for its application was, in the first instance, extremely imperfect. Under these circumstances he called to his assistance M. Darcet, an able mechanic and chemist, and with him perfected the apparatus, at present so extensively and successfully employed at the Hospital St. Louis and other places. As Mr. Wallace remarks, it is for this apparatus that the profession are particularly indebted to

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* 1. Observations on sulphureous fumigations, as a remedy in rheumatism and diseases of the skin, by W. Wallace. M.R.I.A. &c. Dublin, 1820.

2. Researches respecting the medical powers of chlorine, particularly in diseases of the liver, &c. &c. &c. by W. Wallace, M.R.I.A. &c. London, 1822.

3. Observations from experience obtained in various diseases, particularly those incidental to hot climates, by the external application of the nitro-muriatic acid, &c. by Phineas Coyne. London, 1822.

Messrs. M. Galés and Darcet; for the efficacy of sulphureous fumigations had been long known, and probably would have been much practised, had an instrument existed, calculated to prevent the inconveniences arising from their use by the common apparatus. The success of M. Galés' treatment, and the authenticity of his reports are fully confirmed by a committee of professors of the faculty of medicine of Paris, whose report to the minister of the interior, Mr. Wallace has published.

The sulphureous fumigations which seem at first to have been confined to the treatment of scabies, and some other chronic cutaneous diseases, were in the end extended, with the greatest possible advantage, to the cure of some of the most obstinate chronic affections, such as neuralgia, sciatica, chronic rheumatism, local palsy, and hemiplegia. But for the advantages to be derived from the use of this remedy in such cases, the thanks of the profession are more particularly owing to M. de Carro, of Vienna. The perusal in 1817, of a Memoir, written by M. Galés, on sulphureous fumigation, made a lively impression upon him, and he entered on the dissemination of sulphureous fumigations with the same energy and philanthropic ardour, which distinguished him at a former period in the cause of vaccination. Mr. Wallace tells us, that, much to the honour of the profession, and no doubt most gratifying to M. de Carro, his advice and example were so generally adopted, that in a short time, he forwarded forty-eight apparatuses, which among other places were established at Presburg, Breslau, Rome, Prague, Trieste, Venice, Parma, Warsaw, Brunn, and Lemberg. In 1819, M. de Carro published his Observations, in which he communicates a history of the first two hundred cases, in the order which they occurred. We have already said that M. de Carro more fully confirmed the utility of the fumigations in rheumatic, syphilitic, and arthritic cases, than M. Galés had done. Of sixty-five persons labouring under rheumatism, sciatica, and arthritic, twenty-five were cured, thirty-two much relieved, and only eight received no benefit. Of ten inveterate syphilitic affections, where mercury had been abused, five were cured, four much relieved, and only one received no benefit.

In addition to many extracts from M. de Carro's correspondence with various physicians, and which afford ample testimony of the value of fumigation, Mr. Wallace has made some observations on the mode of its application, purposely avoiding any particulars of the result of his own experience. He says, that to enable a practitioner to give this remedy a fair trial, he must first pay the greatest attention to the selection of appropriate cases; secondly, be provided with a perfect apparatus; thirdly,

judiciously attend to the medical treatment of every case that requires it, before the patient enters on the employment of fumigation, both while under its influence, and after it has terminated. He states, that it is in chronic diseases that we shall principally derive benefit from fumigations; and more particularly in such as, although produced by internal causes, have become purely local, persisting after the cause that produced them has been removed. From very extensive experience, he strongly recommends this treatment in a very large proportion of cutaneous diseases, particularly in most cases of prurigo, ichthyosis, pityriasis, morbus pedicularis, several forms of porrigo, all cases of scabies, many of sycosis, lupus, and ephelis, and with other remedies in pompholyx, impetigo, ecthyma and rupia. If fumigation be ever used in cases of a more acute nature, it must be with the greatest caution.

The profession is already familiar with the idea of the employment of NITRO-MURIATIC ACID as a substitute for mercury in hepatic diseases, &c. from the warm manner in which it was recommended by the late Dr. Scott of Bombay. (*Med. Chir. Trans.* VIII). In the paper published by him in the Medico Chirurgical Transactions, which contains the fullest exposition of his opinions and practice, he appears to consider that the beneficial operation of nitro-muriatic acid is to be attributed to the chlorine evolved by the mixture, but on this point he speaks undecidedly. Mr. Wallace had long adopted this idea, from various considerations, and had supposed that the different reports of the effects of nitro-muriatic acid, might depend on the more or less perfect performance of absorption by the skin, as is the case with mercury. Hence, he concluded that he could not hope to arrive at the means of administering this remedy, so as to produce at all times its specific influence on the system, except by employing it in a form more advantageous for cutaneous absorption than that in which it is generally used, or by improving the absorbent power of the skin. His researches on sulphureous fumigations had already, as we have have said, demonstrated to him the superior efficacy of medicines administered in a gaseous form; particularly if the body was at the same time excited by exposure to a high temperature.

At the present day great importance is attached to the diseases of the LIVER, and they seem to have apparently increased in a corresponding degree. We cannot help thinking, however, that on this point, there is much exaggeration and misconception, and that this indiscriminate and general way of arranging, and consequently of treating diseases, is very often a cloak for ignorance or indolence in those who are unable or unwilling to under-

take the task of drawing a clear diagnosis. Although we differ in some degree from Mr. Wallace as to the frequency, we perfectly coincide with him as to the importance and obscurity of hepatic diseases. This seems to be also the opinion of some of the latest and best writers; thus, says Portal, "il n'y a point de maladies, qu'on connaisse moins, et qu'on traite avec si peu d'avantage que celles du foie." (*Observations sur la nature et de maladies du foie,* 1813.

The proofs which Mr. Wallace brings forward of the efficacy of CHLORINE, are principally contained in nine cases, in which hepatic disease was successfully treated, either as a primary affection, or as the cause of secondary disorders of various kinds. We shall make an abstract of one of these to shew the manner and effects of applying the chlorine.

The patient was an unmarried female aged 35; her liver enlarged and hard, not very tender; she had a sensation of dragging in the right side of the abdomen, an incapability of lying on the left side, and a feeling of weariness in both shoulders; she was pallid and emaciated, her bowels constipated, evacuations ash-coloured, urine variable, skin harsh and dry, feet œdematous, appetite not very bad, digestion much impaired. She had used mercury even to salivation, without any benefit. Her complaints arose from mental anxiety at the distance of a year; the first symptom was suppression of the menses. Mr. Wallace began by ordering the general application of chlorine, in the dry form for half an hour each day, at the temperature of 104° Fahr. and aqueous vapour and chlorine to be directed in a stream to the region of the liver, for fifteen minutes daily, with some occasional purgative medicine. At the end of a fortnight her mouth and throat were a little sore, the secretion of saliva was increased, and a thick papular eruption had appeared over the region of the liver. She was less despondent, the bowels more lax, and the evacuations very scantily tinged by bile; she perspired occasionally, which she had not done previously. In a month her bowels were much more regular, the stools for the most part bilious, occasionally whitish, frothy, and fœtid. The size of the liver had much diminished; she slept during the greater part of the night. There was an universal but mild crop of papulæ. The application of aqueous vapour was united with that of chlorine, in consequence of the dry harsh state of the skin, and the topical application to the hypochondrium, discontinued in consequence of the irritation it had caused. It is needless to detail the farther history of the case, as the improvement from this period was gradual and uniform.

When the skin is exposed to the action of chlorine, suffi-

ciently diluted with air or aqueous vapour, at the temperature of 110° Fahr. sensations are in a few minutes excited on different parts of the surface, resembling those produced by the bites or stings of minute insects. These sensations gradually increase in number but not in severity, and at last become, by their frequent repetition, rather troublesome. The sensibility of the skin is at the same time much increased, and remains so for some time after each operation. Another immediate effect of the above manner of application is an increase of perspiration. This, Mr. Wallace does not think altogether to be attributed to the heat in this operation. One of the most remarkable effects on the skin is an eruption of very minute papulæ, an occurrence which the author considers as desirable, having observed the use of chlorine to be most effectual when it appears. The effects of chlorine on the mucous membranes, are shewn by their increased sensibility, testified by a soreness of the mouth, fauces, and œsophagus, with increased vascularity and minute ulcerations of the throat and mouth. The frequency of the heart's action, and of respiration, is certainly much increased by exposure to chlorine, most probably from the temperature at which it is applied. Mr. Wallace asserts that chlorine has the power of tranquilizing, and at the same time exciting, the nervous system; we confess that we do not see how this evident contradiction is to be explained. He allows that, on some occasions it has appeared to increase the nervous state of patients. Such are its sensible effects, and he next proceeds to speak of what he would call its insensible effects; he supposes that this medicine modifies the tone of the organic fibre in a gradual manner. We are bound to believe that he attaches some definite idea to this expression, but he should have given an explanation of it; for as he has set it down it conveys no meaning.

Chlorine may be employed in a pure or in a diluted state, either in combination with heated air or aqueous vapour: it may be applied either generally or partially, and at various temperatures. For the administration of diluted chlorine, Mr. Wallace at first used the fumigating apparatus, constructed under his direction, at the Dublin Infirmary for diseases of the skin; he has since adopted a new instrument, which is portable, and peculiarly adapted for this and similar purposes. He does not describe it, as he was unable to procure engravings in time for the publication of this treatise. Perhaps it would have been in this case better to have delayed the publication. The quantity of chlorine necessary is regulated by the state of the patient, and of the disease. The time for which it is applied, is to be at a medium, half an hour, the temperature from 98° to 120° Fahrenheit. The

gas is procured from a mixture of three parts of sulphuric acid, sp. gr. 1400 with four parts of a compound of black oxyde of manganese and muriate of soda, three parts of the latter and one of the former.

In the TREATMENT of diseases by chlorine, Mr. Wallace recommends with it the use of laxatives or purgatives. He adds, that though the advantages to be derived from chlorine, used in the manner above described, are greater than those that can be obtained from nitro-muriatic acid in any form, he has no wish to see the latter method wholly abolished. Its application is more easy in the case of children, and it may be procured when the other cannot. He is not of the opinion of those who view chlorine in the light of a substitute for mercury, although there is some similarity in the effects produced by both, particularly as regards their action on the liver and salivary glands. He concludes by disclaiming any pretension to a complete investigation of all the medical properties of chlorine, or of bringing it forward as a specific in hepatic diseases, and by assuring us that his object is to communicate such facts as may bring a new and valuable remedy to the test of experience.

We have little to say of Mr. Coyne. His pamphlet was, as he tells us, written nearly three years since, and he now presents us with it as a kind of substitute for an intended work, by Dr. Scott. There is one thing in it, which will perhaps give a more unfavourable impression of it than it really deserves, namely, the intelligence "that it is not intended solely for the perusal of gentlemen of the faculty." It principally consists of some criticisms, not altogether free from personality, on some individual who has been bold enough to disparage the virtues of the nitro-muriatic acid bath; some observations on Mr. Guthrie's trials of it, at York Hospital, Chelsea; on Dr. Scudamore's report of it; and in a few cases where he himself found it beneficial. We must allow that he fairly proves the trials of this remedy to have hitherto been very imperfectly conducted, and in a manner which by no means justifies the conclusions drawn from them. The author professes to have no wish to make a panacea of this remedy, but there seems to be a little unintentional deception here, for the share that he attributes to the liver in the production of most diseases, and the powers assigned to chlorine in hepatic disorders comes to nearly the same thing. The proportions of the acids which he recommends, are three parts of muriatic to one of nitric, and this is a point to which attention is to be paid, as the varying reports on the efficacy of the remedy may be in some degree attributed to this cause. We cannot flatter Mr. Coyne, by the supposition that his tract is likely to

promote in any great degree the interests of the remedy he advocates, and we can only regret, from the high character he assigns to Dr. Scott, that he did not live to complete his purpose.

The remedies recommended in this article will doubtless soon be extensively tried, and in the end justly appreciated. To ensure this object, attention to facts, and caution in drawing inferences from them, are all that are required, and we shall feel more than satisfied if our endeavours should attain the intended objects, the advancement of our profession and the approbation of our brethren.

Bingham on Diseases and Injuries of the Bladder *.

This essay contains a clear and satisfactory account of a class of diseases, generally acknowledged to be exceedingly difficult to distinguish, and of which the cure is often tedious and uncertain—we mean diseases of the bladder. These diseases are modified according as they affect the muscular or mucous lining; and we have been much pleased by Mr. Bingham's discrimination of them, and his very clear and practical account of the causes, upon which they depend—so very different from the confused account which has been usually given of them, under the title of cystirrhœa, or catarrhus vesicæ. Irritability, is a symptom of almost all affections of the bladder, but it may also exist as a separate complaint, or as arising from sympathy with some other diseased organ. Thus, in children the bladder becomes irritable from a faulty state of the bowels; and is, almost to a certainty, cured by proper purgative medicines. A gentleman, aged twenty three, without any previous disorder in the urinary organs, passed his urine frequently in small quantity, and a forked stream. There was no stricture, but a very irritable state of the canal. This patient was studious, and hypochondriacal; he had furred tongue and irregular bowels. He was put upon Mr. Abernethy's alterative treatment—blue pills, sarsaparilla, purging salts, bitters, &c. and it was found, that, in proportion as the gastric symptoms were relieved, so did the irritability of the bladder diminish.

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* A Practical Essay on Diseases and Injuries of the Bladder, being that to which the Royal College of Surgeons adjudged the Jacksonian prize for 1821, &c. &c. by Robert Bingham, Fellow of the Royal College of Surgeons, author of practical essays on strictures of the urethra, &c. p. p. 467, London, 1822.

On more minute inquiry, it was found that he committed three great errors in diet; he ate bran bread, took suppers, and drank wine, a mode of life to which he was unaccustomed. These errors being corrected, and blue pills and magnesia being occasionally administered, all the symptoms of irritable bladder ceased. Ulceration, also, in various parts of the bowels produces, or at least protracts, an irritable state of the bladder. If the ulceration exist in the lower part of the canal, the fœces may be natural, but there are patches of pus upon them, corresponding to the ulcerated points; the patient has slight griping pains; and, when the bowels seem to move, there is pain in the bladder, and towards the extremity of the penis.

From the great sympathy which exists between the kidneys and bladder, irritability of the latter is a frequent consequence of disease in the former. Morgagni relates four cases, in which the pain and irritation in the bladder were so severe, that it was thought the disease was in that organ. Two of these had calculi in the kidneys—in another, the kidneys were tuberculated, and the fourth had one kidney entirely diseased, but it is not said how. What is most remarkable, is that one of them never experienced any pain in the region of the kidneys, and in the others it was so slight that the possibility of the disease being in the kidneys was never suspected. A gonorrhœa, also, or other disease in the urethra, produces irritable bladder, for which Mr. J. Hunter recommends opiate enemata, and blisters to the perineum. In this last case the affection is owing to *continuous* sympathy. Stricture in the urethra is almost constantly attended by irritable bladder.

Affections of the prostate produce irritable bladder, but the diseases of these two organs influence each other so much, that it is difficult to discriminate which is cause, and which effect. We must attend to the history of the case: if the symptoms of diseased prostate existed previous to frequent desire to make water, and if the symptoms are aggravated by such causes as act upon the prostate only—such as riding on horseback, we are to conclude that the irritation in the bladder arises from the prostatic disease. The irritation in the prostate is more particularly marked by a sense of heat and fulness, with dull aching pain in the perineum. If the prostate be enlarged, we ascertain it by examining by the rectum; and in this case, there is also a partial retention of urine, which may be the chief cause of the irritable state of the bladder. This is to be remedied by the introduction of the catheter. A medical student just come up to town had been troubled

for ten months with a sense of heat in the perineum, frequent micturition after riding on horseback, troublesome erections, and emissions during sleep; at last aching pain and fulness were felt in the perineum, so that he could not bear to sit with his thighs closed. The desire to make water came on every ten or twenty minutes; the stream was twisted or forked occasionally, and it would stop suddenly and be then succeeded by pungent pain along the urethra. The tongue was furred, bowels irregular, and countenance anxious. He was limited to eat only three times a-day of plain food, to drink little at a time, to take an occasional dose of castor oil—the blue pill and sarsaparilla were also prescribed, but the latter disagreed and was changed for decoction of bark, and afterwards of gentian. The urinary symptoms yielded in proportion as the tongue and digestion improved, and in eight weeks he was in all respects well.

This irritable state of the bladder, may be accompanied with mucous discharge, owing to some cause exciting and maintaining encreased vascular action of the mucous lining of the bladder: the most frequent cause, according to our author, is retention of some portion of the urine. It is obvious, however, that the state of the digestive organs has a very marked influence on the mucous secretion of the bladder. Injuries and diseases of the spine are said to be the causes of mucous discharge only in so far as they operate in preventing complete expulsion of the urine. All means calculated to allay nervous irritation, may occasionally be useful in irritable bladder with mucous discharge; opiates, either by the mouth or rectum and warm fomentations, especially the hip bath. If the urine be imperfectly evacuated, after these and other means of treatment have failed, we must use the catheter. Great attention of course ought to be paid to the state of the digestive organs.

Mr. Bingham considers the uva ursi useful only in so far as it is a light tonic astringent remedy. The fact of its occasionally tinging the urine, is no proof that it possesses any specific effect upon the urinary organs, for the pulvis rhei, and many other remedies have the same effect. Every one now knows that medicines which affect the stomach and bowels, may produce changes in the quantity and appearance of the urine. We have seen many obstinate cases of irritable bladder, with mucous discharge, cured by giving the Tinct. Muriat. Ferri freely, and a blue pill once or twice daily, together with attention to preserve the bowels in a regular state. A very interesting case is given, in which the complaint was kept up

materially, by ulceration in the lower bowels; and the chief treatment was directed to allay irritation in the digestive organs.

Mr. Bingham is a true disciple of Mr. Abernethy's school, in not only curing his patient by strict attention to the digestive organs, but also in attributing many morbid affections to the peculiar state of these organs. Such are now the practice and opinions of the profession generally. But we scarcely can agree with Mr. Bingham, when he refuses to allow affections of the spine to act directly upon the bladder; "they act," he says "through the medium of the digestive organs, &c." As the bladder derives its nervous energy directly from the spine, we think, were it only for variety's sake, we may be allowed to consider disease of the one, as directly producing disease in the other. That the digestive organs are affected at the same time, and that they claim great attention in the cure, is not to be denied.

A stout young man fell from a height, and broke his back at the lowest dorsal vertebra. After the first three weeks the urine became loaded with a white thick mucus, which felt gritty under the finger, and passed with difficulty through a large catheter. The quantity of mucus corresponded with the state of the bowels: if he had no stool for several days, which was frequently the case, the mucus was in great abundance, and the irritability of the bladder so great that no urine could be contained without pain. He died a year and a half after the accident.

Mr. Bingham was called to see a boy who had a swelled knee, and who was attended by a physician for symptoms of consumption. Discovering a strong urinous smell, he asked how the boy made his water, and was told that he could not retain it a single moment. The belly was swollen, tense, and tender to the touch. Six pints and a half of urine came away, when the instrument becoming plugged with mucus, was withdrawn. The bladder was found incapable, by the natural efforts, of expelling a single drop. The urine contained a large quantity of thick glairy mucus. There was a curvature of the sixth and seventh dorsal vertebræ. The power of the lower extremities was ultimately lost; obstinate constipation was succeeded by fits of violent purging; the bladder felt thickened and was completely flaccid; caustic issues were of great service for some weeks, but they lost their effect; the boy became hectical, and died.

The degree of contractile power which remains in the bladder depends, in a great degree, upon the part of the spine which is diseased. If it be so high up as to cut off all nervous communication with the bladder, then the patient loses all controul over the actions of his bladder. Some involuntary power is de-

rived from the pelvic and abdominal ganglia; but even the degree of it depends considerably upon the state of the medulla spinalis; so that the lower down the spinal disease is, the more power will these ganglia possess.

INFLAMMATION of the BLADDER is denoted by swelling, burning pain, and tenderness in the hypogastric region; incessant desire and violent straining to make water; vomiting and tenesmus; frequent pulse, and other febrile symptoms; restlessness; a wild expression of the eyes, which Mr. Bingham particularly adverts to; occasional delirium, and retention of urine. If the inflammation be violent in the neck of the bladder, the retention, and consequent tumour in the hypogastrium, will be greater. Mr. Bingham was called by a medical man to see a patient with cystitis, and he particularly observed the wild expression of the eyes. The other gentleman attributed it to alarm; and merely said he was doing very well; but the patient died in a very few days. From long chronic inflammation of the bladder, the blood-vessels become exceedingly enlarged. Dr. Hoffman records the case of a studious man, aged forty, who had suffered for six years from chronic cystitis; when he died, some of the vessels of the bladder were as large as goose-quills.

An active, strong, old man, underwent the operation of lithotomy;—considerable difficulty was experienced in extracting the stone. On the fourth day from the operation the man laboured under violent cystitis;—he had the wildness of the eyes, and great anxiety of the countenance. In a few days he died; all the vessels of the bladder were in a congested state, and the internal surface was lined with a thick coat of coagulable lymph.—This inflammation may also end in the formation of pus. Mr. Bingham inspected the bladder of an old man who had died of inflammation of the bladder, with discharge of pus, and the mucous lining was found to have the same appearance which the external surface of the urethra presents in the violent stage of gonorrhœa. Cases of inflammation, ending in sphacelation, are mentioned by Morgagni and Hoffman. This occurrence is very frequent from retention of urine.

A gentleman eighteen years of age, who had slight ailment of his urinary organs, having one evening indulged freely in the pleasures of the table, was attacked with all the symptoms of a violent cystitis, with complete retention of urine, which had lasted twelve hours. A pint of high coloured urine was drawn off with relief; he was bled and had leeches to the perineum. A dose of calomel, and repeated doses of castor oil, were prescribed, also the warm bath and fomentations. The following day the same treatment was persevered in, together with saline

effervescing draughts. The urine required to be drawn off for several days and the case did well. Mr. Bingham thinks the catheter ought to have been used more frequently during the first twenty-four hours; every sixth hour, in place of twice in the twenty-four hours, because of the irritation, which urine lodging in the bladder must occasion. In this case, doubtless the more frequent introduction of the catheter would have been useful; but in general we think that if proper means be adopted to subdue inflammation, and allay irritation, the catheter will not require to be used at all.

We must pass over Mr. Bingham's observations upon retention of urine, and its consequences; the use of catheters; on puncturing the bladder, &c. many of which are ingenious and practical, and highly deserving of consideration; but of these subjects we have already spoken at great length in this number, (*See article, Ducamp on Strictures, &c.*) Cases are described, by Dr. Baillie, of the whole inner membrane of the bladder being destroyed by ulceration, and the fibres of the muscular coat laid as bare as if they were nicely dissected. The best criterion of the presence of ulceration in the bladder is, when the matter discharged has a dirty red appearance. Mr. Bingham was called to a poor man between 70 and 80, who for four years had been affected with difficulty in making water, itching round the anus, pain in the hypogastrium and perineum, and very acute at the extremity of the penis. For the last twenty-four hours these symptoms had been violent, and there was complete retention. A pint of dark turbid urine was drawn off, which was followed by a quantity of whitish pus or mucus, and that by pus of a dirty red colour. The pulse was sharp, and the digestive system greatly disordered. He had also disease in the prostate. He was ordered to leave off drinking spirits, to take milk morning and evening, instead of tea; boiled meat to dinner; to use fomentations over the pubes and perineum frequently. He had a dose of Dover's powder in the evening, followed by repeated doses of neutral salts, &c. Next day he voided a pint of urine naturally; as much more was drawn off in the evening; followed by dirty red pus as before. After a variety of treatment, the pus that came away, became of a white colour, and the urine had a whey-like appearance and a purulent smell. He was now taught to introduce the catheter himself, which he did every four hours, and under this plan, and a few grains of Dover's powder at bed-time, the pain above the pubes and in the perineum ceased; there was no more pus in the urine; but if he neglected to use the catheter for twenty-four hours, the symptoms again threatened to recur. He contined to use the catheter every six hours, and enjoyed a tolerable state of health.

Schirrus is apt to extend from the uterus, rectum, or prostate gland to the bladder; but it is doubted if schirrus ever commences in the bladder. Dr. Baillie says, he does not think this organ is often *singly* affected. No symptoms peculiar to this affection have been taken notice of, though Mr. Bingham is disposed to place some reliance upon a gnawing pain in the hips and thighs, and the occasional passing of bloody urine. The bladder however, becomes thick and hard, and exhibits the ordinary cancerous structure. All the symptoms, therefore, of imperfect contraction of the organ have place. Malignant fungus may project from the prostate gland, and produce impediment to the passage of the urine. A gentleman aged 70, had for years been troubled with soreness along the urethra, difficulty in passing urine, amounting occasionally to retention; he generally made water every ten minutes through the day, and very often during the night; after exercise the urine was bloody: sometimes it was pale and had a peculiar odour, and when poured away there remained a substance in colour and consistence very like almond oil, in which there seemed a little dark brown powder mixed. Tongue furred and bowels slow. Life sedentary and studious. He was recommended to be careful in his diet; to avoid fermented liquors; to bathe himself about the perineum twice daily, and keep the bowels regular by means of small doses of castor oil. He could not empty his bladder. Various remedies were subsequently tried, but what afforded most relief was the following.

℞. Bals. copaibæ gtts. x.
Carbon. Soda, grs. iij.
Tinct. Opii. gtts. iv. M. et capiat 4ta q : q . h.

Several months afterwards he experienced stranguary which ended in complete retention. The catheter was passed without difficulty, and two pints of urine, followed by a little bloody pus, were drawn off.—Nov. 7. He had passed a more comfortable night, and made nearly half a pint of bloody urine. Six ounces, with blood and pus, again drawn off. He had opening medicines. Great irritation continued for several days, but on the thirteenth he began to improve; he had only been up once during the night to make water, and he passed some in the morning, in all a pint. He was now taught to introduce a flexible gum catheter himself; at first he used it as often as every two hours, but in a few days he could hold his urine six hours at a time. He continued in a moderate state of health till the end of March, when blood began to come away in his urine, and large quantities of very thick tenacious mucus. He now used the uva ursi, which in a few days was followed by a secretion of colourless urine. He con-

tinued improving till the end of August, when he began to complain of gnawing pains in the hip and thighs, which were supposed to be owing to disease in the neck of the bladder. For this he took every night at bed time, ten grains of Dover's powder, and half a grain of calomel, with relief. In June he was feverish, and had swelling of the ankles, and he could not lie down to sleep. The hip-bath, which previously had been of service, now appearing to do no good, was given up. Nitrate of potash, and antimonial wine were now ordered, and the effect, according to the author, was quite wonderful. He could lie down, the fever left him, the tongue became clean, and the bowels regular; he walked about from room to room, and rode round his garden in a wheeled chair, neither of which he had been able to do for twelve months before. By the month of August, however, the symptoms again recurred; the pain in the hips especially tormented him when he lay in bed; he had also cramp in all the posterior muscles of the thighs. In October he was very feeble and much afflicted with the pain in the hips and legs, for which it was necessary to have them rubbed almost constantly; the irritation in the urethra was also exceedingly troublesome. In November sloughing over the sacrum took place, he became unable to introduce the catheter himself, so that the urine was not drawn off for twenty hours, after which he became much worse. He had occasionally violent rigors, and uncontroulable fits of purging. He died on the 20th December. An irregular mass of hard fungus projected from the neck of the bladder, and surrounded the internal orifice of the urethra. The fungus was of the cauliflower shape; it was crossed in all directions, by hard white bands, between which were enlarged veins, filled with dark blood. There were two other small fungi, growing from the fundus of the bladder, not so decidedly carcinomatous, being rather of a pulpy feel. There was pus in the pelvis of each kidney and in the bladder, and an abscess between the sacrum and rectum. This case shews clearly the great advantages of regularly emptying the bladder by means of the catheter. The blood which appeared in the urine doubtless came from the ulcerated surface of the fungus. The cause of the excruciating pain which the patient experienced in the limbs, is not accounted for, but is supposed by the author to be in some degree diagnostic of schirrous bladder. We doubt if it can be diagnostic of more than irritation, communicated to the great sciatic nerves, from morbid affections acting upon some of the nerves of the sacral plexus. Mr. Abernethy relates the case of a sailor whose leg was amputated on board ship; but as the wound did not heal, he was at the end of a few month's admitted into St. Bartholo-

mew's. The most remarkable circumstance observed in this man's case was, that every time he made water, he felt so excruciating a pain in the stump, that though a strong man, he screamed with agony. On examination, he was found to have strictures. These were cured, and he had no longer the violent pain when he made water, and the stump healed rapidly. It is easily understood how irritation in the nerves of the urethra might be propagated to the sacral plexus, and the pain referred by the patient to a different branch of the same plexus.

Incontinence of Urine, owing to a want of power in the sphincter vesicæ and muscles of the urethra, is best treated by means of cantharides. In the expulsion of the urine these muscles relax, while the detrusors act; hence, the urine is expelled or retained by the reciprocal action of these two sets of muscles. This complaint is generally most troublesome during the night, when the voluntary power which we have over the muscles ceases. Cantharides is known to act so violently on the retaining muscles as to produce stranguary; hence, by regulating its effects, the lost power in the sphincter may be restored.

An old man had incontinence of urine for some time, from deficiency of power in the sphincter vesicæ. A large blister was applied over the sacrum for twenty-four hours; its lower edge was then raised, and the cuticle punctured to let out the serum, and the blister again laid down. Between the second and third day, stranguary came on; the blister was removed, and when the stranguary ceased, it was found that the patient had recovered the power of holding his urine. In a case related by Mr. Hyslop, in the Medico-Chirurgical Transactions, the patient had been subject to incontinence for nine years. A large bougie was passed, which filled the urethra, and three inches of it were cut off and laid on the outside of the penis, in the direction of the urethra, and an adhesive strap passed round the whole, so as to completely shut the urethra. After five hours, a great desire to pass urine came on, when the straps were removed, and he was allowed to empty the bladder. This plan of treatment was continued for three days, when the young gentleman was completely cured. It is probable the bladder was possessed of too much sensibility, and that the cure was effected by obliging it to bear a greater stimulus, whereby its unnatural sensibility was removed. No doubt, part of the good effects arise also from the retained urine exciting the contractile power of the sphincter.

In the Medico-Chirurgical Transactions there is an exceedingly interesting case, by Mr. Barnes, of Exeter, of inconti-

nence, arising from an unnatural communication between the bladder and vagina. A young woman was delivered of her first child by the perforator and crotchet. During the labour, the feeling and power of the lower extremities were lost. A dark and fœtid discharge followed, in which were observed small portions of membranous sloughs; and from the seventh day she lost all power of retaining her urine. At the end of three weeks a catheter was introduced, and an opening at the neck of the bladder, communicating with the vagina, was found more than an inch in extent. Its edges were soft, irregular, yielding, and neither painful nor bleeding when touched. She had, at this time, nearly recovered from the paralysis of the lower extremities.

A flat catheter was now left in the bladder, and an elastic gum bottle introduced into the vagina. A piece of thin, fine sponge, as large as a dollar, was sewed to one side, and a double thread passed through the bottom of the bottle, and left hanging out at its neck. The sponge was well smeared with calamine cerate, the bottle dipt in oil, folded longitudinally, and passed into the vagina, with the sponge in front. From its elasticity it immediately expanded, and by a finger introduced through its neck, it was readily placed in its proper position, so as to bring the sponge opposite the perforation in the bladder. The catheter was then withdrawn. In this situation it filled the vagina, and kept up so gentle, and yet so uniform a pressure upon the injured part, that the urine was perfectly retained for more than two hours, after which it required to be drawn off by the catheter, or the urine began to ooze away. It was not thought that the opening would be stretched by the inconsiderable dilatation of the bladder from the urine collected during the course of two hours, as she drank little, and the urine drawn off seldom exceeded two ounces. Provided no urine passed through the opening, the principal object appeared to be attained, and the patient was at the same time enabled to get out of doors. When in bed, a short, flat, catheter was kept constantly in the bladder. The bottle was withdrawn every morning and a fresh one introduced before she left her bed. In a short time she could pass the catheter herself; she could move, sit, or lie without inconvenience, nor was she ever wetted, unless the bottle became soft from use, which was as carefully guarded against as possible. At the end of a month the opening was perceptibly lessened; at the end of two, it was not more than large enough to admit the catheter to pass into the vagina. During the fourth month the bottle did not answer in keeping her perfectly dry; but the opening had contracted so much that the catheter could

not be felt through it. There was some depression at the injured part, which allowed the catheter to be distinguished more sensibly than either above or below the spot. In a few weeks more, the aperture was believed to be closed, but the same treatment was continued a fortnight longer, when the bottle was left off during the day, as it was found she remained perfectly dry without it. The catheter, however, was still introduced every two hours, and at night the bottle and catheter were employed as before, to keep up a moderate pressure, and to prevent distention of the bladder. The time of drawing off the water was gradually lengthened, until it was retained six hours, when the use of the catheter was continued a few weeks longer, and then given up; the bottle had been left off before. At the end of nine months she resumed her natural habits, in every respect as well as before her labour. Though the loss of substance was as great as commonly occurs in cases of this nature, yet the opening may be considered as having been closed at the end of little more than five months from the receipt of the injury.

Mr. Bingham believes that CALCULUS IN THE BLADDER is frequently formed out of the secretions of the bladder. A catheter was introduced into a patient who had mucous discharge, and after five days withdrawn, when the end of it was found encrusted with calculous matter, so as nearly to shut up the opening in the instrument. After the mucous discharge had ceased, another catheter was introduced, and allowed to remain three weeks; but at no period of this time, did any deposition of calculus take place. In another patient, a catheter was introduced for retention of urine, and allowed to remain a few days. On withdrawing it, there was no calculous matter upon it. It was again introduced, and allowed to remain four days, during which time, it produced irritation, and copious mucous discharge. On attempting to withdraw the instrument, it was found difficult to do so, from a considerable quantity of white calculous matter, which had formed on the point of the instrument on the inside as well as the out, part of that on the outside, having been broken off on withdrawing the instrument. These facts led Mr. Bingham to believe, that vesical calculi were formed from the secretions of the bladder. Another circumstance favourable to this opinion is, that vesical calculi are more frequent in infancy; renal calculi, in old age. It is probable that if both were formed of the urine, the aged and the young ought to be equally liable to them.

Those who have the posterior lobe of the prostate gland so much enlarged as to prevent the complete evacuation of the urine, are very subject to vesical calculi. Morgagni, and Sir

Everard Home, have particularly remarked this. Mr. G. Langstaff, punctured the bladder above the pubes in two instances and both of these patients had stone formed in the bladder. Mr. Langstaff considers this a reason against puncturing above the pubes. The theory of this, according to Mr. Bingham, is, that the urine not being completely voided irritates the bladder—causing its mucus to be secreted in great quantities; which morbid secretion contains in abundance the earthy substances of which vesical calculi are formed. Sir Astley Cooper remarks, that when a great number of calculi are formed in the bladder there is generally an enlargement of the prostate, depending upon a saculus being formed in the bladder directly behind the enlarged gland, so that the bladder is rarely completly emptied of its contents, and the *calculi crystalize from the urine retained in this sac.* But according to Mr. Bingham, the mucus of the bladder is often so loaded with earthy matter as to be perfectly white, the particles of which are often so large as to be felt by the fingers. Foreign substances introduced into the bladder, not only constitute the nuclei of future calculi, but, also, by exciting irritation, increase the quantity of mucus, which is considered to be the chief source of the calculous matter. It is well known that vesical calculi are chiefly composed of the phosphates, whilst renal calculi are generally brown coloured, and seldom contain the phosphates; and when stones consist of various coloured strata, the outermost is generally white, the reason of which, probably, is, that the brown part of the stone formed by the urine, irritates the bladder, and causes it to pour out unhealthy or encreased secretions which deposit the white layers round the surface of the calculus. It is well known that any of the vessels in the body may occasionally secrete phosphate of lime.

We believe this subject is still obscure, though we are disposed to give considerable weight to the reasonings of Mr. Bingham. We perceive many objections, indeed, which might be brought against his doctrines, though the fact, that the secretions of the bladder may contain some of the earths, and that these may be agglutinated so as to form culculi, throws considerable light on some points connected with this subject.

Encyclopedia Medica.

Remarks on the Tonic Treatment of Phthisis, with Cases of Dyspeptic Phthisis, by John Hume, M.D. *&c. &c. read to the Clydesdale Medical Society, December* 6, 1822.

[Communicated by the Author.]

Although an infinity of essays have been written on Phthisis, some of them by men of distinguished talents; I beg leave to offer a few remarks on that subject, in which I have no intention to trouble you with a minute detail of cases or dissections, but merely to give the result of my experience in that disease for the last twenty years.

In the neighbourhood of Hamilton, which Dr. Cullen, with a pardonable partiality, used to call the Montpelier of Scotland, and whither he has been known to send his consumptive patients, the cases of Phthisis which occur are not numerous, and this is no doubt in a great measure owing to the comparative mildness of the climate. The mean temperature of the air is about 50° of Fahrenheit. There are no hills in the vicinity of the town, but the country rises gradually all round it for some miles, to the height of from four to eight hundred feet above the level of the sea; except in a north-west direction, where the Clyde proceeds towards the Atlantic. The prevailing wind, perhaps for nine months of the year, is from the south-west; and in the months of November, December, and January, it is sometimes very high, and attended with much rain. The frost seldom continues long, and occurs generally in December and January. The mean height of the Barometer is 29 ½ inches.

The origin of Phthisis, for the most part, is attributed, in this neighbourhood, to cold; but it is not those persons, of either sex, who are most exposed to the vicissitudes of weather, that are most liable to its attacks. It is the female who is generally confined to the house by some sedentary employment, or the sedentary artisan, who most frequently become its victims; whilst those escape, as I have just said, who are much in the open air and in constant motion. Yet this fact, though forcibly pressed upon our observation, had, at one time, and still has, in many instances, little effect upon our practice. Instead of imitating nature, and inuring the patient, who is threatened with Phthisis, to exercise in the healthy breeze of the open day, we too often confine him to the house and consign him to inactivity, and a stagnant, and perhaps an unwholesome atmosphere, especially if he be of the lower order. And to make the disease more speedily fatal, we put the patient upon a spare diet, and farther destroy the tone of his stomach with deleterious drugs, particularly digitalis. In short, we believe the disease to be inflammatory, and not in a chronic but an active form; and even in its last stage, we but too often draw out against it the whole array of the antiphlogistic regimen.

Such were my views of Phthisis fifteen years ago, and I was so impressed with the fatal nature of hectic fever, that I was apt, at least mentally, to give up all hope of the patient who was subject to it. E. W. an unmarried lady, betwixt 30 and 40 years of age, had, during the winter of 1807 catarrhal symptoms, attended with slight hœmoptysis. In March of that year, she was visited by a late eminent Surgeon in Glasgow, to whom, a few days afterwards, I wrote concerning her, as follows. "She is weaker than when you saw her, still loathing every kind of food, and taking little or nothing to support her but the wine. The only sleep

she obtains is from the opiate. She is generally chilly through the day, and always in the night, till a sweat, breaking out towards morning, relieves her. She still complains of pain and tightness in her right side. The cough, however, is not severe, and at present she has no purulent expectoration; but the spitting of blood has returned. Her pulse is 120 and feeble. Her bowels are always bound, except when moved by the Pil. Aloes c. Myrrha. She has taken four grains of prepared steel every day, since you saw her, and a tea spoonful of Tincture of Columbo; upon the whole I see no reason to alter my opinion that she is consumptive, and that there is little hope of her recovery. I gave you my reasons for agreeing to the tonic plan of treatment, which I believe the doctrine of the schools has condemned in Phthisis." This lady continued for some weeks in a very precarious state. Her fever, in a short time, assumed a very distinct tertian type, returning every second day at the same hour, with a severe shivering, which lasted about fifteen minutes. Purulent expectorations, alternated with spitting of blood. Her morning perspirations were not lessened. She became extremely weak and emaciated; yet she could not be prevailed upon to keep her room, but always came down stairs to the parlour. The tonic plan of treatment was continued. As soon as the first daisy appeared on the ground, I walked out with her for a few minutes, and had her out every day, till her appetite began to improve, and she could extend her walk to some distance. Then I mounted her on horseback, and persevered through the summer with that exercise, although I saw her frequently spit out blood during the ride. Dr. Baillie having been consulted on her case, recommended the warm salt water bath and change of scene. This was complied with, and she gradually recovered health and strength; and the patient, whose life I once dispaired of, is now a stout fat woman.

D. M. an officer of the Royals, a young man of a somewhat corpulent appearance, was seized with very profuse hœmoptysis, in the winter season of 1804. As his pulse was strong and quick, he was bled largely, and took the acidulated infusion of roses, with Saline laxatives. Under this treatment the hœmoptysis disappeared, but having in a short time returned, the same treatment was repeated, and with the same success. By this time the patient was much reduced. Hectic fever made its appearance and a very profuse purulent expectoration. He became very deaf. At this time a Staff Surgeon, who had once been in the Royals, visited him, and proposed the employment of digitalis; but as I objected to that medicine, he prescribed some mild pectoral medicine. Merely as an experiment, I now put him on the use of calomel, combined with prepared chalk; of which he was to take a powder twice a day, containing a grain of calomel and two grains of chalk. Although constantly confined to bed, he had a keen appetite; and thinking the case desperate I allowed him to eat any thing he pleased; but advised him to live chiefly on milk. He complied with my advice so earnestly, that for some weeks, he took the almost incredible quantity of eight quarts of milk every day. He took three dozen of the above mentioned powders; but without having his mouth in the least affected by them. Occasional opiate and pectoral medicines were administered. As the spring advanced his hectic symptoms abated, and in May I had the pleasure of mounting him on horseback, and, in a few months, he recovered nearly his usual health. He soon after sailed with his regiment to the West Indies, and in a few years I had the pleasure of seeing him again at Hamilton in perfect health.

L. A. a married Lady, in her 65th year, had been for a long time in an infirm state of health, principally from chronic Rheumatism. She was seized with giddiness in March 1816, which continued till the latter end of June, with little or no abatement, in spite of the various remedies employed. She was now seized with feverish symptoms, attended by cough, soreness of her mouth and throat, and difficulty of swallowing. Although her fever was violent, the emaciation and debility of her frame were so great, that I dared not use general blood-letting.

However, I used the antiphlogistic regimen to a certain extent, applied leeches and blisters to her throat, and used gargles. The mouth, tongue, and fauces were now covered with a whitish slough, and swallowing became so painful and difficult that I was apprehensive of fatal consequences, particularly as the cough was still severe, and respiration by no means easy. The mind, however, was unaffected. In addition to the above symptoms, she complained of pain in her chest. I then determined to put my trust in blisters, and applied them repeatedly to various parts of the thorax, till the threatening symptoms were subdued, and the mouth and throat began to look clearer. Pectorals were administered, but not in great quantity, as the patient had a natural irritability of stomach which made her very readily loath such medicines.

By the 20th of July, the feverish symptoms were greatly lessened, but there was much cough, and an expectoration of purulent matter. She was also much troubled with flatulence, and there was an entire loss of appetite. At this time the rheumatic pains had left her. For her cough and spitting, and to procure sleep, I prescribed pills at bed-time, composed of opium, kino, carbonate of ammonia, and extract of chamomile; and to improve her stomach and general strength, I gave her bitters, prepared with gentian, colombo, aromatics, and carbonate of potass. Her bowels were kept regular by gentle laxatives. To repress feverish irritation, and check the spitting of purulent matter, she was ordered pills, composed of kino and alum, but her stomach could not bear them. By the beginning of August she was gradually introduced to the open air, first in a carriage and afterwards on foot, and by the 20th of October, the expectoration was almost gone, though there was still a great deal of cough and debility. I now prescribed for her pills, composed of extract of gentian, carbonate of iron, and aromatics; and under their use she not only recovered her appetite, but gained a much greater degree of strength than she had possessed for some years. They were continued till the latter end of November, when, unfortunately, the patient caught a fresh cold. During December, her cough was exceedingly severe, and came on in paroxysms, at uncertain periods, with purulent expectoration, at times streaked with blood Her pulse varied from 68 to 90. There was a degree of chilliness occasionally, but no distinct hectic fever. A full inspiration produced a fit of coughing, but its sound, to my ear, did not indicate that the cells of the lungs were much stuffed; nor did any pain attend the inspiration. Her appetite was rather good, but her emaciation great. She slept well, but that she attributed to the pills of opium and kino, which she had never omitted since her summer attack. She had one or two blisters put to her chest, and she used gentian and colombo in infusion. Her bowels were kept open by the Pil. Rhei Comp.

In January, 1817, I drew up a statement of her case for Dr. Gregory, who prescribed hemlock pills and decoction of bark. The pills did not agree with her; but she took some of the bark decoction, and as the spring advanced, she gradually recovered, under the use of steel and bitters. For her cough, which continued to teaze her very much, I found nothing so beneficial as a mixture composed of Acetum Scillæ, Flores Benzoini, Nitrous Æther and Syrup. It acted upon her like a charm. During the summer, she took much exercise, and went two journeys to the distance of thirty miles. She continued the same plan winter and summer, and enjoyed, excepting a slight cold occasionally, good health for some years. Yet she never could lay aside the compound opium pills, though she never increased the dose. At length, in the summer of 1821, when thirty miles distant from Hamilton, she was seized with feverish symptoms, and with pain in her side, for which a respectable practitioner bled her from the arm. I was called to see her; at which time she was in a state of languor, approaching to stupor, which carried her off in a few days; her vital powers being quite exhausted.

E. L., an unmarried lady, in her twenty-eighth year, of a family in which there have been instances of phthisis, consulted me in January, 1822. Though not of a

very robust constitution, she has been enabled, till of late, to take much exercise in the open air, and often on horseback. Then she used to sleep 10 hours; but now hardly five; and her want of sleep at present is occasioned by a kind of restlessness, difficult to describe, but which is not owing to any sort of alarm. The heat of her skin is natural in the middle of the day, and she has no sensible perspiration at that time; but about seven in the evening, there is a considerable degree of heat on her skin, alternating occasionally with chill, of about ten minutes duration, and followed, at length, by sensible perspiration, which, however, abates before she goes to bed, betwixt ten and eleven. During the continuance of the heat she is very thirsty. She has pain in short twitches, and sometimes for a whole afternoon, in the left hypochondrium; but on certain days she does not feel it; yet on drawing a deep breath, she is always sensible of a slight pain. She complains also of pain behind the left scapula, and of great weakness in her back. She has often pain all over her brow; and, at such times, the brow is generally very red. She has a dry cough, which is hard at times. The pulse is 80, and feeble. Her tongue is clean. She has very little appetite to breakfast; she can eat a little at two in the afternoon; but betwixt five and six, she can take no dinner. Her diet is always very plain. She has no immediate sickness after eating; but, an hour after, she is troubled with heartburn. When the weather is fine, she walks out, about an hour every day, without being much fatigued; but, after walking half a mile, she is rather short of breath, and inclines to perspire. She also sometimes rides on horseback, or in a carriage. Formerly she could read aloud for a long while, and with ease; but now she never attempts it. Her bowels are generally costive. The menses appear at the usual time, but in small quantity; and generally there is a very slight appearance of leucorrhœa.

This lady used the vinegar and water friction, as recommended by Dr. Stewart; took laxatives of various kinds, so as to regulate the action of her bowels; was put upon alternate courses of steel and bitters, and took a good deal of exercise in the open air. She also had repeated blisters applied to her side, and at times she used the tartar emetic ointment, so as to produce numerous crops of pustules. In the early part of summer, though her health was much improved, she was sent off to Lisbon; whence I had the pleasure of seeing her return, in the beginning of October, in perfect health.

I could give many more instances of recovery from purulent expectoration and hectic symptoms by the use of tonics and well-regulated exercise in the open air, were it at all necessary. Cases, however, have occurred to me, as they must have done to every man who has practised medicine for some time, which at first did not appear in the least unpromising, but terminated fatally in a very short time. Hence the young practitioner should use every precaution against this deceitful malady; for in no one is it more necessary, *principiis obstare*, than in this.

Thus phthisis, in its incipient state, will sometimes, for months, assume the appearance of a stomach affection, attended with debility, languor, headache, giddiness, flatulence, nausea, vomiting, and costiveness; without cough or a single hectic symptom; and whilst the physician is directing all his attention to the gastric symptoms, the real disease is making a very gradual but sure inroad on the constitution. Such appearances, however, occur most frequently in the delicate female in the higher orders of society, who is fond of sedentary amusements, and cannot easily be prevailed upon to breathe the refreshing gales of the country, but who will cheerfully sit up half the night at a ball or a music party, dancing, as Dr. Gregory says, in his strong language, into her coffin. Many of these I have known fall sacrifices to the disease; whilst, in the country, I have known a young servant girl, with an asthmatic cough, and an occasional spitting of blood, live for years under her complaint, and, perhaps, at length recover, although exposed every day to the vicissitudes of the weather. I have often recovered young persons of the middle ranks, who had been necessarily much confined to the house, by send-

ing them twenty or thirty miles from home, and enjoining them to take exercise in every possible shape in the open air, and to use, at the same time, some of the most approved tonic remedies. But I presume that such treatment is familiar to most medical men.

I may here mention that I have known several instances of early pregnancy in unmarried females assume, most accurately, the appearances of incipient phthisis. Yet in these cases I have observed a kind of anxiety, or secret fretfulness of mind, which is very rarely a concomitant of phthisis. But here it is the absence of the menstrual discharge that is most complained of, or it is that which we are most earnestly solicited to restore; and physicians, in similar circumstances, cannot be too much on their guard; for I have known a case of pregnancy mistaken for a combination of phthisis and dropsy by one of the present ornaments of medicine. —" Honestæ etiam matronæ hac de re interdum decipiantur, et medicos ideo in turpem et periculosum errorem ducunt: innuptis vero, ex plebe saltem, de mensium defectu conquerentibus, propter causas satis manifestas nunquam temere credendum est."

In the treatment of phthisis, I wish we could attend solely to the *juvantia et lædentia*, and try not to be influenced by hypothesis, or at least by every new one which is introduced. In my opinion, with all our boasted acquirements, we have made very little improvement on the theory of Galen. He thinks that the acrid humour of catarrh, gradually descending into the lungs, first corrodes, and then ulcerates them. The concomitant fever of this state is hectic, which is to be subdued by the internal and external use of refrigerants. Such is his hot consumption, where wine or stimulants are evidently improper. But in his tabes frigida, which he likens to the emaciation and debility of old age, he recommends the warm bath and cordials. In short, it would seem that his hot consumption, with hectic fever, is our incipient phthisis, with strong inflammatory diathesis, and his *tabes frigida* is phthisis, accompanied by emaciation and debility. Hectic fever, he tells us, may accompany the disorder of any internal organ, and is more or less curable in proportion to the greater or less expenditure of innate moisture; being altogether incurable when that is nearly expended, or, in other words, when the patient is reduced to a state of extreme emaciation or debility. These opinions will be found in Galen's Treatises de sanitate tuendo, de differentiis febrium, et de Marasmo.

Were it likely to be of any use, I could give cases where I have used blood-letting, digitalis, astringents, particularly kino, alum and superacet. plumbi, vinegar, and other acids, expectorants, balsamics, and tonics. It will be sufficient, I imagine, to mention the result in general terms. Unless in the first attack of hœmoptysis, when every thing indicated strong inflammatory action, I have always found that general blood-letting hastened the fatal termination of the disorder; whereas, local blood letting is often serviceable, if previously the patient is not too much reduced. In one case, where hæmoptysis had returned with unusual violence, and when there was apparently strong arterial action, venesection was employed with immediate relief of the urgent symptoms, but in a day or two, purulent expectoration followed, with hectic fever, which continued till the patient's death. The same opinion may be given of digitalis. In inflammatory cases, and when the patient is not much debilitated, I have used it often with decided benefit; but when there is purulent expectoration and debility, it is worse than useless; and I fear that, in this country at least, he who expects from it the advantages experienced by Dr. Magennis will be disappointed, at least, I have been. In one case, when the pulse was 120, and feeble, and when there was much purulent expectoration, I gave it, by the advice of an eminent physician, from the 28th of March to the 11th of April, gradually increasing to 100 drops of the tincture in twenty-four hours. It was discontinued, on account of its causing pain in

the stomach, want of appetite, and waking dreams; in fact, the patient, without knowing what it was, refused to take any more of it. It certainly lessened febrile action, and produced a great flow of urine; but in this, as well as every similar case I have used it in, there was great reason for believing that it hastened the patient's death. The trials made with the Prussic acid, in this neighbourhood, are not much in its favour.

Of astringents, I think that kino, when joined with opium, has often a very great effect in lessening expectoration and repressing febrile action; and in several cases, where I used superacet. plumbi, in conjunction with opium, I was at first very sanguine in my expectations of a cure; but, in the end, it proved equally unavailing with other remedies. However, it seemed to produce no bad symptoms; and it evidently palliated the pectoral affection and its concomitant fever. The pills of Mons. Orban were also attended, for a short time, with the same good effect; however, they too are but palliatives. The same may be said of vinegar and other acids in various forms; of which, perhaps, the best is the infusion of red roses, acidulated with muriatic acid, and made palatable with sugar. I was led to the use of muriatic acid in phthisis, from having found that medicine eminently serviceable in scrofula, when taken for a long while in large quantities. An excellent pectoral mixture is made with treacle, honey, vinegar and laudanum. Syrups, prepared with balsams of Peru and Tolu, form a medicine agreeable to the patient; but they are merely palliatives; and the same may be said of all mucilaginous and oily mixtures. In some constitutions, the squill made into a balsam, with flowers of benzoin, nitrous æther, and syrup of sugar, seemed to have a wonderful effect in allaying, or even obviating, if taken in time, such coughs as harass the patient in severe paroxysms.

But of all the modes of treating phthisis, either incipient or confirmed, the tonic appears to me to be decidedly the best; and which, though it certainly cannot cure confirmed phthisis, prolongs the patient's life and renders him much less susceptible of those annoyances that unavoidably, for a long time, precede death. But, to be successful, this treatment must be commenced at a very early period. Then, provided there are no violent inflammatory symptoms, frictions, with cold vinegar and water twice a day, on the breast, or the whole body, till the skin is quite dry, exercise in the open air, or on horseback, in a carriage, on foot, or in a swing, according to circumstances; nourishing, but plain food, taken at such intervals as not to load the stomach, with the occasional use of steel and bitters, are the most proper remedies. Pain in any particular part may be removed by the application of leeches, aromatic embrocations, blisters, or the tartar emetic ointment. From the few trials which I have made with this remedy, I am inclined to have a very favourable opinion of it; for when pustules have been excited by it, they have never failed to give wonderful relief to the internal symptoms, although they themselves may have occasioned very considerable irritation. In one case, however, where even its frequent application failed to produce pustules, the patient complained of inexpressible anxiety and uneasiness in the epigastric region.

The greater part of this plan, I confess, is borrowed from Dr. Stewart; although, long before I knew how he treated phthisis, I had appreciated the good effects of bracing remedies, and had employed many of them; and, in debility, or irregular action of the bowels, had often used, with the very best effect, a powder composed of crab's-eyes, rhubarb, nutmeg, ipecacuanha, and ginger, given so as to prove gently laxative.

Dr. Stewart was led to the peculiar practice which he has adopted in consumption, from reflecting attentively on some of Dr. Gregory's statements, when lecturing on that disease. In the opinion of that celebrated physician,—and indeed, of that of many others,—consumption, in the generality of cases, originates in a scrofulous constitution. What then is the cure, or the attempt at cure, in scrofula? Is it not to invigorate the constitution by a rich and generous diet, by exercise in a pure and

open air, particularly near the sea-side, and by the cold bath? If such be the mode of cure directed for scrofulous ulcers on the surface of the body, is it not natural to believe that ulcers of the lungs, probably arising from a scrofulous cause, will be equally benefited by a similar treatment?

In cases where the skin glows with much heat, where the pulse is firm, strong, and quick, with severe topical pain, Dr. Stewart sees, at once, the propriety of using the antiphlogistic regimen; and in this he entirely agrees with the far greater number of physicians. But, would he do so when the patient is enfeebled, where there is merely chronic inflammation, and where, though the pulse is quick, it is so only from debility? Surely we should not argue, from the patient having a quick pulse, that he should be put on a lowering diet and use debilitating remedies. Is it not notorious that, on the approach of death in very old or infirm persons, the pulse beats with a very increased quickness? When the heart has little ability to send forward its contents, its efforts, of course, are more feeble, but, at the same time, they are more frequently made. That quickness of the pulse, then, and febrile heat which are occasioned by ulceration of the lungs, in conjunction with chronic inflammation, cannot be cured, in the opinion of Dr. Stewart, by such means as will depress the general vigour of the system. If a patient, of an emaciated habit, with feverish symptoms, had foul ulcers on his limbs, would any one of our modern physicians prescribe blood-letting and purging as the best means of curing him? Or would he direct all his attention to the very slight inflammation at the edges of the ulcers, and neglect entirely the constitutional derangement? Would he not try rather, by a nourishing diet, mild cordials and bark, to invigorate the system, that the vessels may recover their native tone, and, instead of a vitiated secretion depending on debility, be enabled to exude a healthy lymph, which may form granulations and consolidate the diseased surface? The very same thing Dr. Stewart wishes to effectuate in cases of internal ulceration and debility. In consumption, he gives nourishing diet, pure or diluted wine, bark, steel, and other tonics; he uses exercise on horseback or in a carriage, or in any other practicable mode; and he employs friction with vinegar and cold water; all with the design of bracing the system, and enabling it to assume that healthy action which alone can render it capable of resisting the sudden vicissitudes of our climate. In short, if he cannot make the weather suit his patient, Dr. Stewart tries to make his patient invulnerable to its attacks. He has been accused of giving wine and beef-steaks to a person who is spitting blood, and at the same time under the influence of strong arterial action. So far from this being the case, he would be amongst the foremost, in such cases, to recommend the antiphlogistic regimen, and even to administer digitalis, a medicine which he unequivocally condemns in phthisis. But even in chronic inflammation, and ulceration of the lungs he approves of blistering, and makes no opposition to the occasional employment of topical blood-letting. He pays the utmost attention to the regular evacuation of the bowels, and at the same time, takes great care not to give heating cordials.

I regret that I cannot give a more detailed account of Dr. Stewart's practice; but I hope that it is not misrepresented. I know that the late Dr. Gregory lent all the weight of his great name to sanction it, and even carried the treatment to a far greater length than was ever done by Dr. Stewart. In the convalescence from fevers, we are every day taught that a quick pulse is no obstacle to the use of cordials. In a case of this kind, and at the moment when the patient had lost, by stool, about four quarts of blood, I prescribed wine, brandy, and laudanum, with the happiest effect.

All this may appear very trifling to some persons; but I am confident that if every physician who has been many years in practice, would candidly state the result of it, medicine would, in this way, make a much greater progress than can possibly be made by the tedious detail of innumerable insulated cases. However, I am not adducing the foregoing remarks as an example of this kind.

Obstinate Venereal Ulcer, tending to Cancer, cured by the Occurrence of Inflammation. By G. C. FENAGLIO, M.D.*

THE patient, in this case, was of low stature, strong, and very irritable. He had been affected about six years with an ulcer on the left side of the glans, a mucopurulent discharge from the urethra, and pains in the limbs. He had repeatedly undergone mercurial treatment without success, partly from its being ill-directed, and partly from his own want of attention. He was recommended to undergo a course of mercurial frictions, during which, hernia humoralis occurred, and was removed by antiphlogistic treatment. Tired of the remedy, he soon suspended the frictions, the pains having ceased, and the ulcer, though somewhat improved, being far from cured. For about a year, under the direction of another Professor, he employed fumigations of cinnabar and sublimate. These seemed at first to diminish the callosity; but the hopes thus raised soon vanished. Quite worn out, he again applied to M. Fenaglio. The appearance of the ulcer had considerably changed; its size was much increased, with fistulæ, and an ichorous discharge; there were some fungosities, so hard and painful as to excite a suspicion of a cancerous disposition. The relator tried another mercurial course, which was not followed by any accidents, the disease, however, remaining nearly in the same state, excepting that the discharge ceased, and a thin cicatrix took place, but without any diminution of the original induration. He advised the patient to avoid stimulant applications, and looked forward to the necessity of extirpation at a future period. Things remained thus for some months; the tumour occasionally ulcerating, and discharging sanies. At the end of this time, the patient despairing of a cure, exerted himself violently in hunting, at the same time eating and drinking to excess. The consequence was, a very violent and painful inflammation of the diseased parts, which, by its termination in a fortnight, by healthy suppuration, removed, at once, all the disease and the author's fears of a cancerous diathesis, which, he confesses, was most probably the result of the mercurial treatment.

On the Use of Music in Chorea. By M. B. PAPINI, *of the Commune of Stazzema, Tuscany.*†

LUISA Milani della Mulina, in the commune of Stazzema, aged seventeen, slight, and not regular, was attacked, in December, 1820, with remittent fever, accompanied by pains in the epigastrium, and sopor, occasionally interrupted for a few moments, during which she could not speak. She was relieved by a purgative, and the fever gradually diminished. On the thirteenth day, Dr. Papini was suddenly called to his patient. He found her in a state of lipothymia, the pulse hard, slow, and intermittent; the face pale, though flushed occasionally. At this moment the parish clock struck; she seemed to discern it, moving, at the same time, the right thumb and the left great toe. Dr. Papini ordered a tambourine to be sounded, and the patient accompanied it by a general motion of the body. He sent for a violin and clarionet, and no sooner were they sounded than the patient leaped from bed, and danced, with her eyes shut. The music was continued, and in the evening the spectators were surprised to see that a widow, sister to the patient, 40 years of age, and mother of eight children, had joined her. On serious consideration, the relator ordered the music to be discontinued, seeing that it tended to make the disease contagious. The parents assented, and discharged the musicians; but these, consulting their own interest, flattered them with the prospect of a cure by continuing the performance. The dancers joined in these entreaties, and the music was resumed: the result was, that after two days and nights' exer-

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* Annali di Medicina. Dec. 1821.

† Omodei. Annali. Febbrajo, 1822.

tion, the patients became tired, and declared themselves relieved. Dr. Papini pretended ignorance of the censures directed against himself, and waited the event. In thirteen days he was again consulted, both patients having relapsed. He repeated his visit, and found them in a state of debility, and the legs of the widow œdematous. He gave both of them bark and valerian for eight days; afterwards, valerian and opium, without success. They refused to use the cold bath, and he gave up the treatment. At the end of a month they wished either to be allowed music, as before, or to be treated by medicine. Dr. Papini adopted the latter plan, and began with opium and valerian, increasing the doses. At the end of eight days, the widow surprised him by saying that she was much improved, whilst the sister remained in the same state. He learned subsequently the cause of this change, by finding that the widow was about to be married to a young man.

The younger sister became regular; but though her susceptibility to music was lessened, the face remained pale, the pulse irregular, with oppression at the heart; there was occasional leucorrhœa, with pain in the hypogastrium, a relaxed state, and some symptoms of dyspepsia.

*M. Birago on Leeches applied to the Anus.**

THE first part of this little work is composed of a precise description of the arteries and veins distributed on the intestines, and from their communications, a deduction is drawn of the good effects of leeches applied to the anus, not only in hernia, but also in the inflammations of the abdomen, as hepatitis, enteritis, nephritis, matritis, &c. In the treatment of these, if the horizontal position, with cautious attempts at reduction, be not sufficient, M. Birago recommends the adoption of the antiphlogistic plan, particularly the application of many leeches to the anus, with the expectation of diminishing the state of irritation and turgescence in the strangulated intestine, through the medium of the free communication existing between the hemorrhoidal and other intestinal vessels. He directs the nates to be considerably raised, the thighs and legs to be bent and separated, for two reasons; because this position renders the application of the leeches more easy; and because it facilitates the return of the hernia. If the symptoms increase rapidly, it is necessary to have recourse to this operation repeatedly, with the addition of general blood-letting, if the patient be robust. In many of the cases, this plan contributed, either with or without the taxis, to the return of the strangulated parts, and those in which the violence of the symptoms rendered an operation necessary, were, in some degree, relieved; whilst the application of leeches to the anus was afterwards employed, with the greatest success, to moderate the enteritis resulting from the operation.

Leeches applied to the anus are also recommended in traumatic paraplegia, that species depending on falls, blows, &c. upon the sacrum, and their utility demonstrated by anatomy, that is, by the communications of the hemorrhoidal vessels with those of the lower part of the spinal marrow, which, in such cases, is inflamed and loaded with blood. Some practical observations are added, of such cases as were cured by this means, in which the warm bath was employed to encourage the flow of blood; gentle purgatives, and the permanent retention of a catheter in the bladder, to discharge the urine.

The second part relates to the beneficial effects of the caustic potash in scrofulous diseases. The author's professed object in its application is to excite the vitality of the lymphatics, which he thinks principally concerned in such affections. He relates fifteen cases of scrofulous abscesses successfully treated in the

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* Compendio di Osservazioni cliniche sub. vantaggio delle mignatte applicate all'ano nelle ernie incarceratc, e sulla potassa caustica applicata in diverse mallattie de carattere linfatico; del Dr. C. Birago, chirurgo primario dello spedale maggiore di Milano, &c. Milano, 1822.

manner he recommends. He also shews the advantages of the canstic potash in some other lymphatic affections, particularly of the scrotum, testes, and uterus. To reduce a slow, lymphatic disease, when arrived at the stage of inflammation, and to obtain suppuration, with a removal of obstructions and effusions, he asserts that nothing is more proper than to apply a permanent stimulus, which may excite the surrounding parts, and such, according to him, is the action of the potash. Its utility he thinks particularly great in the diseases of the testicles and scrotum, from the liberal manner in which those parts are supplied with absorbents. Several cases, in proof, are given of cures of sarcocele, arising from different causes, as also a case of hydro-bronchocele, successfully treated in this way, notwithstanding the occurrence of hemorrhage on the separation of the eschars. The author extends the use of the potash to some diseases of the uterus, particularly obstructions and indurations of the body and cervix uteri, which have a tendency to scirrhus. In these cases he recommends the applications to be made to the groins, that is, to the terminations of the round ligaments, where the blood vessels and absorbents of the external parts communicate freely with those of the uterus. In conjunction with such means, mercurial frictions on the thighs may be advantageously employed. The treatise is terminated by the relation of some cases in which the caustic potash proved successful in the treatment of metastases of scrofulous diseases to different organs.

Test for Oxalic Acid. By the EDITOR.

IN consequence of the numerous accidents which have occurred from mistaking oxalic acid for Epsom salts, several tests have been proposed to distinguish them. Tasting is certainly the readiest method; but few people like to taste a reputed poison. Test papers, prepared by turmeric, or by litmus, do very well, but are not always at hand. A more ready method would be to take a little common ink in a writing pen and drop into it one or two of the crystals of the suspected salts: if it be Epsom salts, the ink will remain unchanged in colour; if it be oxalic acid, the ink will become of a light reddish brown, and no longer appear as ink, the acid dissolving the black oxide, and forming oxalate of iron. It may be remarked that oxalic acid is only poisonous when taken in doses of from half an ounce to two ounces. Small quantities of it are not deleterious. The writer of this notice, while a student of medicine, was in the habit of acidulating water with it for his common drink, and never experienced any bad effects from its use.

On the temporary ligature for Aneurism.

Dr. WATTMANN, professor of clinical surgery at Innspruck, has successfully employed the temporary ligature. The patient was 36, strong, and of good constitution. The aneurism, a popliteal one, first appeared after vomiting from an emetic, and was rendered worse by a recurrence of the same circumstances. Besides the tumour in the ham, a second appeared three inches above it, on the inner side of the knee. When the professor first saw the patient, the tumour at the inside of the knee was circumscribed, reddish, six inches long, and four wide. Its pulsations were perceptible both by sight and feeling. Below this one, and in the cavity of the ham, was another of smaller size, also pulsating, but not discoloured. The pulsation in both ceased on the compression of the femoral artery.

The patient being placed on a table, the femoral artery was compressed by a tourniquet, where it passes into the thigh. An incision, three inches long, was made in the course of the femoral vessels, the artery was exposed and separated from the vein for three lines; it was then raised by the forceps, and a double ligature six threads thick passed under it; the ligature was divided, one portion was tied round the artery, a roll of plaister being interposed, and the other was retained as a ligature of reserve. The edges of the wound were brought together, a long

compress placed in the course of the femoral vessels, to moderate the impulse of the circulation on the ligature, and the limb was bandaged from the toes to the groin. Cold water was applied to the wound for 48 hours, and the patient kept low. The limb retained its temperature. In the course of the day the pulse was quickened, and towards evening there was some fever. On the second day the patient complained of burning heat in the wound. The cold applications were then gradually changed, first to tepid, and then to warm ones, according to the practice of Professor Kern, of Vienna, who employs these means in recent wounds, particularly after amputation. (*See Quart. Journ. of Foreign Medicine and Surgery*, vol. i. p. 173. On the fourth day the wound was examined, the ligature cut, and the cylinder removed. The ligature was allowed to remain until the following day, and that of reserve until the 8th. The case from this time proceeded well, and the patient rapidly recovered. Putting the temporary ligature out of the question, we may remark that some of the practice here adopted by M. Wattmann was very objectionable, namely the tourniquet, the ligature of reserve, the long compress, and the bandage. [EDITOR.]

The second case is contained in a letter from Professor Fritz, of the University of Prague, to Professor Hildenbrand, of the University of Pavia. The operation was performed Nov. 30, 1819, on the patient, a butcher, aged 40, and according to the method of Scarpa. On the application of the ligature the pulsation ceased and never returned. The ligature was removed on the fourth day without hemorrhage; the wound healed readily, and the man soon recovered.

Affection of the Hair in Gout.

A MAN, about fifty years old, suffered frequently from gout in the head, which occasioned violent pain. Whenever he had an attack his hair began to curl, and to become entangled, so that often in one night, from hanging down straight, it drew itself into a complicated wreathy mass, from which state no combing could again bring it into order. But as soon as the paroxysm of gout subsided, the hair begun to lose this twisting disposition, and could be easily extricated. What is remarkable, it did not afterwards fall off. May not some important conclusions be derived from this on the physiology of hair, and on its powers of life? and may it not throw some light on the plica Polonica, which is well known to be frequently preceded by gouty pains. HUFELAND'S *Journal.*

M. Buffa's Case of Cyst, containing an extraordinary number of Calculi.

The subject of this case was sixty-one, of sanguine temperament, and scrofulous habit. Whilst suffering in 1817 from an attack of gout, he began to pass calculi with pain, tenesmus, weight in the perineum, pruritus of the glans, &c. These inconveniences diminished on the expulsion of the calculi, which, according to the patient, was favoured by moderate exercise. He sought no assistance until 1819, when by the advice of M. Odone, he employed lime-water with advantage. In 1820 the slight though frequent attacks of gout were followed by considerable dysury, weight at the pubes, induration, and increased size of the bladder. A violent cystitis was the consequence of riding on horseback in the heat of the sun, which was neglected for twelve days. At the end of that time M. Odone treated the patient by repeated local and general blood-letting, fomentations, semicupia, and the internal use of lime-water. These means, together with the expulsion of some calculous fragments, quieted the sufferings of the patient, who could not be prevailed upon to allow a catheter to be passed, or the rectum to be examined by the finger. Leeches, with plasters of cicuta and solanum nigrum were applied; the solutions of sub-carbonate of potash and carbonic acid were administered to check the inflammation and convulsive symptoms which had appeared: these seemed to do some good, but the urine was dark-coloured, like coffee, and

mixed with much mucus or pus; there were evening febrile exacerbations, followed at night by cold sweats, and rigors when the patient awoke. The Uva Ursi was tried without at all checking the discharge of mucus. Bleeding was again twice employed to subdue the inflammation, but without success and the case soon ended in gangrene and death.

The DISSECTION performed by M. Odone, shewed that the bladder was monstrously enlarged and thickened; its parietes were an inch and a half thick, resistent and lardaceous. The internal surface appeared tendinous, and the viscus was about a third part full of very fetid, muco-purulent urine; in its lower part was a collection of white and bulky calculi of different shapes, and varying from the size of a spanish olive to that of a large pea. The orifices of the ureters were callous and much dilated. The relations would not permit the examination of the kidneys or other viscera.

The calculi, when extracted, presented an irregular mass; they were rather soft but became harder by drying, at the same time losing somewhat of their bulk. The chemical analysis, performed by Professor Mojon, shewed that they were composed of the phosphates of lime and magnesia with a portion of uric acid.

It is generally believed, by physiologists, that the unimpregnated uterus has no other vital properties than organic sensibility and insensible organic contractility or tonicity; but the author of the tract before us endeavours to shew, that at the period of menstruation it assumes two others, namely animal sensibility, and sensible organic contractility or irritability; that these are commonly latent, and only show themselves under certain circumstances, and particularly at the time of the menstrual evacuation. Besides these, he attributes another vital property to the uterus, which only appears after the occurrence of conception, namely a property of active dilatation, and which he distinguishes from the extensibility of the uterus.

From the facts and arguments he adduces, the following conclusions may be derived. 1. That the vital properties of the uterus, when empty, and in a state of inaction are different from those which animate it after conception and during pregnancy. 2. That physiologists have not sufficiently distinguished those properties which are developed during pregnancy from those which exist before it in a latent state. 3. That the property of active dilatation is peculiar to the uterus in a state of pregnancy, whilst animal sensibility and irritability pre-exist in the manner already mentioned.—4. That much attention is necessary to distinguish the property of active dilatation from the extensibility of the uterus; the animal from the organic sensibility, and the sensible from the insensible organic contractility, i.e. irritability from tonicity.—5. That the sensible organic contractility is the sole power employed in effecting parturition; that it is occasionally prematurely excited to action by the animal sensibility; that possibly the latter is the means by which it is excited, even at the natural period; that it acts with great force, and is capable of overcoming incredible obstacles; that it retains so much force for a considerable time after apparent death, as to be capable of effecting parturition; and that when this process takes place after the total extinction of vitality, (a thing we believe to be impossible,) it is owing to the developement and compression of the gas derived from the uterus and fœtus.

The arguments employed by the author only tend to prove a fact which we have elsewhere asserted, namely, that there is no foundation for the distinction which physiological writers have made between irritability and tonicity, (sensible and insensible organic contractility). The difference is only in degree, and to consider it as any thing else, leads, as in the present case, to confusion and difficulty. Thus it is evidently more simple and more accordant with truth to say, that the contractility of the uterus is more developed during pregnancy, than to suppose that the occurrence of that event creates a property which had no previous existence. As to the property of active dilatation, although it may be admitted in

another structure, as in the heart, arteries, &c. we think it must be rejected in the uterus. It would be taking too simple a view of the matter, to ascribe the dilatation of the uterus during pregnancy, to any particular property; it seems rather to be the result of increased nutrition, and the deposition of new matter in the structures which compose it. (*Omodei Annali.*)

[From a Correspondent.]

Case of Morbid Sensibility of the Hair, by Baron Larrey.

In the hospital of the Royal Guards at Paris, was a private soldier, who had received a violent kick on the occiput from a horse. The cerebral excitement produced was extreme, and could only be kept under by almost innumerable bleedings, both general and local. Amongst a series of phenomena produced by this state of preternatural excitation, the sensibility acquired by the hair was not the least remarkable. The slightest touching the hair, was immediately felt, and cutting it gave exquisite pain, so that the patient would seldom allow any one to come near his head. When dressing his wounds, Baron Larrey, to shew that this was not merely a pretence of the patient, gave a hint to one of the assistants to clip one of the hairs. This, as he was standing behind him, he did unperceived, and that moment, the soldier broke out into a volley of oaths, and afterwards of complaint, and it was some time before he was appeased. We have not heard what became of the case.

Magendie on the functions of the Roots of the Spinal Nerves.

M. Magendie has succeeded in dividing the roots of the spinal nerves, without laying open the vertebral canal, by which he has confirmed, as he thinks satisfactorily, his former experiments, tending to shew, that the posterior roots convey sensation to the limbs; the anterior, the power of motion. It is well known that nux-vomica produces violent general tetanic convulsions in man, and other animals. He was curious to know if these convulsions would take place in a limb of which the nerves of motion were divided: In one animal under the influence of the nux vomica, the posterior roots or nerves of sensation, were divided and the tetanic symptoms were as complete and intense as if all the roots had been left untouched; in another animal, under the same circumstances, the nerves of motion of one of the posterior extremities were divided, and straightway this member became motionless and relaxed; whilst, under the influence of the poison, all the other muscles of the body experienced the most decided tetanic contractions It appears, that when the posterior roots or the nerves of feeling were irritated, the animal testified pain, but it was not to be compared in intensity with what the animal exhibited when the spinal marrow itself, near to the place where the roots have their origin was touched ever so slightly. Each time the posterior roots were irritated, there was also slight contraction of the muscles produced, but it was infinitely more feeble than when the spinal marrow was irritated. These effects were reversed by irritating the anterior roots, for strong and convulsive contractions were then excited, whilst the symptoms of sensibility were scarcely visible. Feeling, it does appear then, is not exclusively in the posterior, nor motion in the anterior roots. But as in these experiments, the roots were still united to the marrow, the irritation may have been communicated to it and so to the other roots, thus producing confusion in the results. Galvanism was also employed as a means of discovering the functions of these nerves; and it was applied to them as well in the divided as in the undivided state, and the contractions, from exciting the anterior roots in this way, were strong and complete.

Three years ago, Mr. Charles Bell in a paper submitted *to the observations of his friends*, says—"Next considering that the spinal nerves have a double root,

and being of opinion that the properties of the nerves are to be derived from their connections with the nerves of the brain, I thought I had an opportunity of putting my opinion to the test of experiment, if different endowments were in the same chord, and held by the same sheath. On laying bare the roots of the spinal nerves, I found that I could cut across the fasculus of nerves, which took its origin from the posterior portion of the spinal marrow, without convulsing the muscles of the back; but on touching the anterior fasiculus with the point of the knife, the muscles of the back were immediately convulsed." Of course these observations were unknown to M. Magendie and therefore do not detract from the merit of his investigations although they have the priority in point of time.

Penetrating wound of the brain, by M. DUPONCHEL.

ON the 8th March, 1822, a soldier of the dragoon guards, received, in a duel, the point of his adversary's sword into the right orbit. The weapon, of which the blade was very narrow, entered at the inferior part of the orbit, fracturing a portion of the rim of the orbit, and glided between the eye ball and floor of the orbit, till it entered the cavity of the brain. M. Larrey saw him the day after the accident. He had hemiplegia of the left side; he was comatose; the irides were motionless, and the pupils dilated; the globe of the wounded eye projected from the orbit; there was difficulty of speech; but the intellectual functions remained perfect, and he answered all questions correctly, at first by speech, afterwards by gesture. He remained in this state till the fifteenth day when he died in strong convulsions. There was slight effusion upon the external surface of the brain of the right side, and some points of adhesion of the meninges. The instrument having divided the optic nerve and opthalmic artery, penetrated into the cavity of the brain, by breaking through the superior wall of the orbit, and the sphenoidal fissure. The instrument had then taken a direction a little outwards, and passed completely through the middle lobe of the brain *without touching the anterior lobe*, or penetrating the ventricle, passing through the middle of the hemisphere, a little above the corpus callosum, to be implanted in the vault of the cranium. It is to be remarked, that no appearance of suppuration could be detected in the track of this wound. (*Bulletins de la Societe medicale d'emulation de Paris.*) 1822.

Critical Characteristics of New Books.

I.—*Select Dissertations on several subjects of Medical Science. By* SIR GILBERT BLANE, BART. F.R.SS. London and Edinburgh, &c. &c. and Physician to the King. *Now first collected, with alterations and additions; together with several new and additional articles.* pp 398. 8vo. London, 1822. Price 12s.

To praise Sir Gilbert Blane's indefatigable exertions in promoting professional improvements, would be altogether a work of supererogation, and we have little inclination to do more in this way than is absolutely required of us, particularly at this season of relaxation and holyday-making. That we admire the venerable baronet who has for more than half a century been one of the brightest ornaments of our profession, we have only to refer to what we said in a former paper, when called upon to defend him from the unprovoked attack of an ignorant and virulent assailant. (*See Quart. Journ.* vol. IV. p. 249.) We doubt not that the same spirits, who put forth their bitter hostility against the Medical Logic, will again muster their swarms to attack the work before us. Let them. Truth will

ultimately come in for all the honours of a triumph, and our author's name can never be dimmed with their infectious breath. The Dissertations, as the title announces, are chiefly a republication of Sir Gilbert's contributions to Medical Transactions and Periodical Publications. To all these papers, however, he has made many important additions, so that they are in a much more perfect form than when originally published. He has also given several new papers containing many valuable facts the results of his very extensive experience. To give our readers an idea of the work, we cannot do better we think, than transcribe its contents. "1. On the Comparative health of the British Navy, from the year 1779 to the year 1814, with proposals for its further improvement. 2. On the Medical Service of the Fleet in the West Indies, in the year 1782. 3, Facts and Observations respecting Intermittent Fevers, and the Exhalations which occasion them, &c. 4. On the Comparative Prevalence and Mortality of different Diseases in London, &c. 5. Remarks on the Comparative Health and Population of England at different periods. 6. On the Effect of large doses of carbonate of potash in Gravel, &c. 7. On the use of pure Alkalies and Lime water in disorders of the Bladder, Stomach, and Skin. 8. On Muscular Motion, &c. 9. On the Yellow Fever. 10. On Vaccination. 11. Narrative of a Hurricane, &c. 12. Effect of mechanical compression of the Head, as a Prevention and Cure in certain cases of Hydrocephalus."

II.—*Illustrations of the Enquiry respecting Tuberculous Diseases.* By JOHN BARON, M.D. Physician to the General Infirmary at Gloucester. pp. 233, 8vo. *With fine coloured engravings.* London, 1822. Price 12s.

The subject of this work possesses very considerable interest, and our author has gone into the inquiry with very considerable spirit and accuracy. The engravings of the progress of pulmonary tubercles are well executed. We recommend the work to all who feel an interest in morbid anatomy, and pathological research.

III. *A Manual of Practical Anatomy, for the use of Students engaged in Dissections.* By EDWARD STANLEY, Assistant Surgeon and Demonstrator of Anatomy at St. Bartholomew's Hospital. *Second Edition, with Additions.* pp. 432, 12mo. London, 1822.

We formerly mentioned, with approbation, a work on the same plan as this, by Mr. Shaw, of Great Windmill Street. This work, of Mr. Stanley's, appears to be equally accurate and complete in all the practical details necessary for the dissecting room, and it is more in a scientific, and less in a popular form. It possesses, besides, the great advantage of being much more portable and handy, Those who do not value expence should have both of these Manuals. Those to whom economy is an object, will find Mr. Stanley's work both the cheapest and most comprehensive in its details. The quick sale of a large impression of the first edition, and a large proportion of the second, shows that its merits are appreciated highly.

IV.—*A New View of the Infection of Scarlet Fever, illustrated by remarks on the contagious disorders.* By WILLIAM MACMICHAEL, M.D. F.R.S Fellow of the College of Physicians, Physician Extraordinary to H. R. H. the Duke of York, and one of the Physicians of the Middlesex Hospital. pp. 100. 8vo. Printed on beautiful hotpressed drawing paper. London, 1822.

Dr. Macmichael seems to be of opinion, that scarlet fever is nearly as universal in its prevalence as measles, or hooping-cough, though its attacks are often so mild

as not to be regarded, or to be considered as some trivial rash of no severity. He also thinks that scarlet fever, like measles and small-pox, only affects the same individual once during life. From these two circumstances, both of which we should hesitate to consider facts, our author thinks it would be advisable—not to inoculate the scarlet fever; but to expose children to its infection whenever it appears in a mild form. Dr. Macmichael, in making such a proposal, should in the first place have furnished us with a clear diagnosis, to enable us to discover this mild scarlet fever which it seems every body has hitherto thought to be only a trifling rash; and secondly, he should have given us some trust-worthy assurance, that the infection from a mild case, will not produce a malignant case. In short we deny Dr. Macmichael's facts, and even if these were proved, we should at once reject his conclusions from them. The next time he speculates upon a Jennerian discovery for the extirpation or amelioration of scarlet fever, we would recommend him first to make sure of his facts, for nobody will admit inferences when the facts are doubtful; and when he has done so, to revise his logic in order to refresh his memory a little respecting the principles of sound reasoning.

V.—*The Rudiments of Chemistry; illustrated by experiments and copper-plate engravings of Chemical Apparatus.* By SAMUEL PARKES, F.L.S. F.S.A. Edinburgh, &c. &c. Author of the Chemical Catechism, the Chemical Essays, &c. The Third Edition, carefully corrected, and adapted to the present state of Chemical science. pp. 378, 12mo. London, 1822, Price 7s.

Mr. Parkes has improved this little work very considerably, and has, we think, made it a very useful manual. In some of his other works, particularly his catechism, he has put his materials very badly together, seeming to be at a loss what to put in his text, and what in his notes; so that you often find a paragraph or a detail of facts quite disjointed, one part being at the top, and another at the bottom of the page, with something between them quite out of place. In the work before us, this has been avoided, and it is neatly and accurately got up. We recommend it to all students of chemistry.

VI.—*Practical Observations on Distortions of the Spine, Chest, and Limbs; together with Remarks on Paralytic and other Diseases connected with impaired or defective motion.* By WILLIAM TILLEARD WARD, F.L.S. and M.R.C. &c. 8vo. pp. 168. London, 1892.

As this work is on a subject of considerable practical importance, and as Mr. Ward has given a number of interesting cases, we shall take an early opportunity of analysing it. We observe that Mr. Shaw has announced a work connected with the same subject, which, from the author's researches, in conjunction with Mr. C. Bell respecting the nervous system, we expect will possess considerable interest.

VII.—*A Toxicological Chart, exhibiting, at one view, the Symptoms, Treatment, and modes of detecting the various Poisons, Mineral, Vegetable, and Animal, &c.* By WILLIAM STOWE, M.R.C. &c. On two large Sheets, broad folio. Fourth edition. London, 1822.

This edition of the chart has been completely revised, and several important additions made to it. We need not recommend it; for its utility is so obvious that it does not require it. We believe that there are few practitioners who have not a copy of it hung up in their studies or their consulting-rooms. We understand that it has lately been reprinted and extensively circulated in Amreica.

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Nº XVIII. APRIL, 1823. VOL. V.

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CORRESPONDENCE.

We feel obliged to Dr. G. Power, for his offered communications; but would rather have any other subject in the whole range of Medical Science than the one he proposes, which at present, at least, can be interesting only to a very few.

We are happy to announce to our subscribers that we have obtained two additional Correspondents of ability at Paris; no fewer than three additional Contributors in German Medical Science; and two additional Contributors in Italian Medical Science, so that we can now promise, with confidence, that our Journal will be improved in variety, and we hope in value and usefulness.

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Foreign Review.

M. Ollivier's Clinical Remarks on Traumatic Gangrene, with Experiments on the Inoculation of the Virus *.

The diseases and the wounds of soldiers have very materially improved the art of medicine, by the facilities which they afford for experiment, and by the vicissitudes and privations which constantly attend the march of armies. In time of actual service, indeed, the military surgeon is generally so much harrassed by severe duty, that he has little time to commit his thoughts to writing; yet to this meritorious class of men, we are indebted for many medical works of great value.

According to M. Ollivier, Traumatic or Hospital Gangrene, is no rare or trifling ailment, but one which has often introduced considerable terror into hospitals; and not without cause; for in the hospital at Lyons, it is said to have carried off eleven-twelfths of all those patients who were attacked by it; and in 1814, in the Hotel Dieu, at Paris, not one of twenty-two amputations escaped its malignant influence. M. Picard states, that in one of the wards of an hospital at Madrid, which contained a hundred and twenty-six wounded men, not less than

* Traité Experimental du Typhus Traumatique Gangrêne ou Pourriture des Hospitaux; contenant des observations nouvelles sur diverses Gangrenes; Epidèmies Contagions; sur les Antiseptiques les desinfectans, &c.; et sur des nouveaux moyens Hygiéniques, applicables aux Hospitaux, &c. Par A. F. Ollivier, M.D. &c. &c. Paris, 1822, 8vo. p. 474, and 54.

fifty-four of the number were seized with it at once. The havoc produced by ithas been undoubtedly exaggerated; yet at Tolosa, in Spain, it cut off a hundred men in two months, out of an hundred and thirty wounded.

M. Ollivier first saw Traumatic Gangrene in the Hotel Dieu, at Paris, in the winter of 1806-7, and since that time in the military hospitals, where he took a faithful copy of its appearances from nature, and paid particular attention to its causes and its treatment. The disease, comparatively speaking, is of modern origin. Hippocrates and Galen, indeed, have written largely on ulcers, and have described some of them as malignant, sordid, and chronic; but in no part of their works can we find any thing resembling this disease. According to our author, Ambrose Paré is the first among the moderns who is known to have been acquainted with it; at least, he has mentioned that in particular seasons, and when the air seemed to be imbued with malignant properties, wounds were difficult of cure or very trifling ones caused death. He also states that, from the same cause, wounds very quickly become putrid and stinking. From his time, it has been occasionally taken notice of; but it is only in the present day that it has been described with accuracy.

The CHARACTERISTIC MARKS of Traumatic or Hospital Gangrene, is an erosion or destruction of soft parts, extending sometimes to the hardest textures, with the formation of a tough crust, which is generally of a greyish white colour, or of sloughs more or less considerable, and at such times there is often an oozing out of a fœtid and corrosive sanies. The edges of the sore are hard and elevated, and of a dark red and violet hue; being often irregularly and perpendicularly gashed, and even turned back. The pain attending it is either intolerable or moderate; the author never having observed a total absence of pain, except towards the termination of very severe cases, when local and general sensibility seemed extinct. There is very often an oozing of blood, which is sometimes converted into a considerable hemorrhage.

In particular cases, the disease runs its COURSE in ten or fifteen days, frequently in twenty-five days, sometimes in a month, and more rarely in five or six weeks. But when it is complicated with colliquative diarrhœa, the patient sinks under it quite exhausted; and then for the most part, its duration varies from one to two, or even three months; but sometimes the destruction of textures, and the vascular fungous excrescences, which are formed, are so considerable, that he perishes in a few days in consequence of an irrepressible hemorrhage. As soon as the

diarrhœa makes its appearance, the event is always fatal, even though the gangrenous part may have been removed: the author draws this conclusion from about forty cases of amputation. He mentions, however, one case of recovery. But even without diarrhœa, or hemorrhage, the irritation of the virus, in whatever way it may act, seems of itself often to produce death.

Antiseptic MEDICINES are rarely of any use. Scarification of the diseased part is the most effectual remedy, and is always successful when it is employed at the very beginning of the complaint. Such were the result of the author's observations in more than four hundred cases of Traumatic Gangrene, of which he carefully watched the progress in all the various circumstances of climate, seasons, and atmospheric influence.

In the opinion of M. Ollivier, there are three FORMS of Traumatic Gangrene, which in many cases, appear to be only different degrees of the same affection. To the FIRST he gives the name of traumatic erosion, or erosion without any apparent scab or slough. Here a wound, which was fast healing, becomes ulcerated or pitted in one or more places, and sometimes at once over its whole surface. The change is notified to the patient by a feeling of pungent heat in the situation of the wound, and on removing the dressing, if it is a partial affection, the surgeon sees a spot of a greyish white colour, which is sometimes bloody; and its accompanying pit is bounded by high edges, which for the most part are circular, and in general become very painful. These edges which are of a dark red colour, gradually recede, or are destroyed by the enlargement of the pit or pits; and when the entire surface of the wound has been affected, its original edges are destroyed in the same manner, though irregularly; and in some cases the cuticle is previously peeled off. The loss of substance soon becomes manifest. However, there is no scab or slough, but in place of it we observe a thick, firm, homogeneous, white or greyish substance, which cannot be removed but with difficulty, and which is very speedily reproduced. Beneath it is a fleshy surface, unequally varied with round or longitudinal eminences, the interstices of which it is no easy matter to wipe clean; their detersion being painful, and always followed by an oozing of blood. The slough possesses various degrees of firmness; often at first it is strongly elastic, and towards the termination of the disease glutinous and more fluid. This form of Traumatic Gangrene lasts about twelve or fifteen days. When the surface of the wound becomes clean, it heals very rapidly, unless the patient has relapses.

This form or variety is rarely observed in wounds that suppurate freely, but pretty often in such as are nearly cicatrized;

and it sometimes makes its appearance in small pustules that rise near the edges of wounds, or the scars of wounds recently healed. These pustules are generally produced by rancid ointments, or the acrimonious pus secreted in the primitive ulcer, or wound: and when the disease makes rapid progress, they very speedily run together, and are united in the original wound. They may have received the specific virus from the wound, or they may have been previously and independently affected. The traumatic erosion generally destroys the whole of the ulcerated surface. It is sometimes complicated with fever; but when the disease is mild all the functions are quite regular during its continuance. According to M. Ollivier, its ravages are confined to the dermoid and cellular textures.

To the SECOND FORM, M. Ollivier has given the name of erosion with slough, or traumatic gangrenous erosion. It is much more severe than the preceding variety, and besides having a firmer slough, the cellular, muscular, and fibrous textures, are separated into shreds, or real sloughs, and the edges of the sores are far more painful and attended with a much greater degree of swelling. The edges are of a copper colour, but the bottom of the ulcer is in general greyish, although sometimes it is brown, and even black in several of its parts. The suppuration is pretty frequently bloody, in particular wherever there are sloughs. When the disease is violent, it has considerable influence on the internal organs, producing loss of appetite, restlessness, want of sleep and fever, all which symptoms, M. Ollivier thinks, are dependent on the severity of pain; but sometimes there is no pain, particularly in chronic cases, and where the patients are in a state of great debility.

If the disease has a favourable TERMINATION, which very often happens, it takes place from the fifteenth to the twentieth day, though the author has known it extend to a considerably later period. After being wiped clean, the ulcerated surface is observed to be uneven, owing to more of the textures having been destroyed in one spot than in another. This variety often follows the first, and is liable to relapse. The relapses are always severer than the primitive affection; and M. Lombard has known them happen eight times successively.

The THIRD VARIETY, differs from the second only in being much more malignant; but it frequently arises without being preceded by the second, which is terminated for the most part favourably, and rarely exhibits any of the phenomena of the third. The author confesses, however, that it is often not easy to ascertain their exact limits, and it does not appear to us to be of very great moment. In the third form, the textures are

changed almost entirely into sloughs. The skin is first attacked, and then the other soft parts in very rapid succession. The wounded surface which in general is grey or brownish, becomes in some cases, of a greenish hue, and in one case M. Ollivier saw it of a black colour. It is very uneven, and its edges are livid. Cellular texture, muscles, tendons, aponeuroses, are seen in every part of it mortified, and altogether destitute of their distinguishing characteristics. In ten or twelve hours, that is from one dressing to another, the whole circumference of the affected surface, becomes of a greenish brown, loses its cuticle, and quickly mortifies. In other cases, the destruction is slower, but it is not the less fatal. The delay is probably occasioned by the greater firmness of the parts.

In common cases, the part at the bottom of the wound is soft and spongy, and covered with a fungous excrescence, which as it grows with great rapidity, often gives occasion to troublesome hemorrhage. The disease frequently attacks the cellular parts of bones, and makes a very strong impression upon them. The discharge, which is often thin and bloody, and for the most part of a greyish brown colour or almost black, is very fœtid; indeed much more so than in the other varieties. The fœtor seems to pervade every part of the hospital.

Soon after the attack, the patients get little or no sleep, lose their appetite, and are seized with a fever, attended with great loss of strength and complicated with diarrhœa, which in a short time proves fatal. About one half of all those who are attacked by this variety perish, and even many more, if circumstances are unfavourable to its cure. The ulcers seldom begin to clean before the 20th or 25th day, even in the most favourable cases. Sometimes one part of the sore becomes clean, whilst the other is affected even more deeply with gangrene. Relapses are very frequent, and almost always attended with great danger.

It is this variety which properly should have the name of Traumatic Gangrene, as the loss of substance it occasions is sometimes enormous, a leg or a thigh having been deprived by it of nearly the half of its soft parts. The compact parts of a bone are seldom touched by the gangrene, unless the sore be opposite to the callus of a fracture, through which the virus may penetrate to the interior of the bone, and in such cases the patients generally die. There the gangrene of the soft parts is complicated with humid necrosis, depending on inflammation of the osseous texture, a state very different from ordinary necrosis. In this opinion, the author differs from M. Delpech, who thinks that hospital gangrene can make no impression on the hard part of

bones. Indeed, as M. Ollivier observes, in ordinary cases, the vitality of the compact osseous texture must be in a state of preternatural activity before it can be affected by the gangrene; but in children, he thinks, this state is not necessary.

M. Ollivier next proceeds to consider ACCIDENTAL or accessary VARIETIES. He mentions a case, on the authority of an army surgeon, in which hospital gangrene was preceded for two days by a shivering, which took its rise from a wound in the hand, and was gradually propagated over the whole body. In ulcers complicated with traumatic gangrene, on the fore and outer part of the middle of the leg, he twice observed two whitish tubercles, the extremity of which was soft and pulpy, and were very speedily reproduced, when torn off by the forceps. From one of them an acrid but very clear liquid exuded. They were both very large, and situated at the lower part of the ulcer, and from their being endued with great sensibility, he supposes that their structure was nervous. He has seen in the space of three days, the greater part of a limb changed into a fungous mass, from which blood oozed as from a sponge; and he has also seen hemorrhage ensue from the actual corrosion of the larger blood vessels. Here the ligature is generally inadequate to suppress the bleeding, and it is even with difficulty that pressure can be employed. It was necessary, in such cases, to depress the growth of fungus by corrosive applications, which were the only means of preventing a profuse hemorrhage. Treated in this manner the fungus lasted about eight days. Its colour is a dark red, brown, or black. No species of wound was more apt to be affected in this way than the stump after amputation; indeed the skin was the only texture, which seemed, in this instance, to make any resistance against the gangrene, and it too in a very short time gave way. In the epidemic which prevailed at Paris in 1814, the gangrene began with excessive pain, and the whole surface of the wound was of a livid colour, and the subjacent parts became dry and withered, of a yellowish grey, and could be removed very easily, without giving the patient any pain. Hospital gangrene is frequently complicated with sinuous or fistulous wounds, which seem to favour the absorption of the virus, and to make it even more putrescent by confinement. If it attack the wound after operation for fistula in ano, it generally destroys the sphincter. Sometimes at the moment of attack, the gangrene produces an immense swelling of the wounded limb, whence it spreads rapidly to the trunk of the body and destroys the patient, and this swelling has no resemblance whatever to the inflammatory tumefaction which in ordinary cases produces gangrene. After

the battle of Talavera, which happened in July, almost every wound which suppurated freely was filled with worms; but probably owing to the causticity of the discharge, this never happened in hospital gangrene.

It is rare that the DURATION of the complaint is different from what has been already mentioned, but a few have been met with where the first variety lasted six times longer than it usually does, and in these cases the disease was only occasionally severe. It is named by M. Ollivier *pulpous gangrene in a chronic form*, and he thinks that its enduring so long without passing the bounds of the first variety, must depend on the strength of the patient's constitution, on his being kept in a separate apartment and breathing a purer air. But what made the disease last so long, and what prevented it from being radically cured?

M. Ollivier next considers the varieties which occur at different times when the disease is EPIDEMIC; observing that these are often extremely complicated, and that even in the same epidemic, the appearances are in general unlike. It was the second variety that prevailed for the most part at the Hotel Dieu in 1807, and few died; but that which occurred in the same hospital in 1810 and 1811 was attended with great mortality. The causes of this difference are unknown. At Madrid, in the winter of 1808 and 1809, in an hospital set apart for wounded men, and which contained about a hundred patients, not one of them died of this disorder, although it prevailed epidemically; but in in 1809 and 1810, at the same season, the disease put on a very formidable appearance, and in a few months, out of three hundred wounded, more than a hundred died of it. It was the third variety, and it was much disposed to assume a chronic form. The mortality in the second case, M. Ollivier attributes to impure air, bad food, and foul dressings. Many of the patients became delirious in consequence of their misery. What at first sight may appear extraordinary, no infectious fever prevailed at this time; and only two persons attacked in the hospital were slightly affected with inflammation of the parotid gland, which terminated favourably. At Carmona, in Spain, the disease was mild, owing to the salubrity of the air and other favourable circumstances; but at Metz, in Germany, in 1813, it was complicated with dysentery and typhus and became very fatal. In the latter case, the privations and fatigue of the army had been extreme, and every thing in the temporary hospitals tended to increase the virulence of infection.

M. Ollivier acknowledges that he has had no experience of the disease in children; but he affirms that in the hospitals of Paris, the gangrenous ulcers of children are much more fatal than those of adults.

In relation to textures, he remarks that in ordinary mortification, the arterial system is long in yielding to its attacks, but that it suffers very speedily from an attack of the hospital gangrene. This gangrene, indeed, spares no texture; and it is absurd in M. Guillon, says our author, to imagine that it attacks white and lymphatic organs in preference to others. That parts far removed from the centre of circulation are most readily affected by it, is an opinion equally unfounded.

In considering the varieties dependent on the kind of wound infected, M. Ollivier observes that, with some rare exceptions, Traumatic Gangrene affects those parts only where there is a breach of continuity. It attacks equally recent wounds or old ulcers, whether simple or complicated with local maladies; he has seen it in combination with venereal, scrofulous, or scorbutic ulcers; and he thinks it very probable that it may even attack porrigo and herpes. It appears on any kind of wound indifferently, newly made or nearly healed; but M. Ollivier has never seen it attack punctured wounds, except where there has been an inoculation of the gangrenous virus.

It frequently commits great havoc on GUNSHOT WOUNDS; and some authors imagine that this is owing to contusion; but our author contraverts this at some length. It is not, he says, during the period of contusion that such wounds are liable to be attacked, but when they are suppurating, and the cure tedious. Incised wounds seldom suffer when their sides are laid closely together and kept in that state. Our author laughs at the opinion of Baron Percy, that gunshot wounds are more apt to be affected with hospital gangrene, on account of the *torpor* and *local debility* that attend them; and he justly observes that such are long past, before the gangrene ever makes its appearance; and thence he takes occasion to condemn those stimulant applications, which are so generally in use to obviate torpor and debility.

M. Ollivier now enters on the consideration of those varieties which are occasioned by FEBRILE complications. Is hospital gangrene a local idiopathic malady without fever, or if it is the consequence of fever, can we trace any analogy betwixt it and the acute exanthemata or rashes? If fever follow it, what is its character? It were vain, says M. Ollivier, to seek for the answer to those queries in answer of the writings hitherto published. We have not room to enumerate the contradictory opinions of the various authors mentioned by Ollivier, but we may observe that he accuses M. Guillon of giving an untrue description of the phenomena that they may suit his theory, He seems to have but an indifferent opinion of MM. Moreau,

Danillo, Laurent, and Percy; but he pays a compliment to the accuracy of MM. Pouteau, Vautier, and Delpech.

When several disorders afflict an individual at once, they may be considered in the light of *cause, effect, or simple coincidence.* This position, which is one of the standard rules of medicine, the author has illustrated at considerable length. When patients, otherwise in good health, suffer in a slight degree from the first variety; or, in the commencement of the second and third, when the pain is trifling, fever is rarely present, the appetite is good and every function is in a healthy state; for the local affection has not acted upon the animal economy either sympathetically or by absorption; but when the pain is very severe, it produces restlessness, want of sleep, loss of appetite, frequency and hardness of the pulse, flushing of the face, symptoms which depend on the irritation of the nerves of the affected part being transmitted to the centers of vitality, the brain, heart, and lungs. If a malignant gangrene attacks an emaciated patient, and if its progress is very rapid, the fever commences very soon after the attack, and is accompanied by an irregular and intermittent pulse, great restlessness, debility, delirium, and starting of the tendons. Death in a very few days terminates the disorder, and every things seems to prove the action of a very deleterious virus upon the Nervous system. Such cases are very rare; more frequently, fever is the consequence of tedious disease, in which the suppuration has become sanious, and where the juices of the body are vitiated by the continued absorption of a putrid ichor. It may be denominated *a putrid hectic or gangrenous phthisis.*

When a febrile epidemic is prevalent in an hospital, it may attack patients affected with traumatic gangrene, or on the contrary the gangrene may attack the wounded who are already in a state of fever, or dysentery may be complicated with both of them. Such accidental complications have led some surgeons into the error of conceiving that they are essentially a part of the disorder. Several surgeons have fixed the precise period at which fever makes its appearance; but this our author declares to be impossible, as many circumstances make it vary. When it comes in at the beginning of the gangrene, and in stout subjects, it is of the inflammatory type; in short, like the fever which attends severe recent wounds. When the disease is of short duration, and the epidemic mild, there is often no fever present; which is proved by the writings of MM. Alexis, Larrey, de Cartier, and Vautier. M. Ollivier, therefore, concludes that hospital gangrene is a disease always *primitively local,* produced by causes which act upon the wound.

The constitutional, or secondary affection, he affirms, is always the effect of absorption, and like the introduction of all poisons into the system, more or less rapid in its appearance in different individuals. A small quantity of absorbed virus, he thinks, may be removed from the system, in a stout person, by the excretory passages, or may be neutralized by pulmonary organization; but when the virus is absorbed at a late period, for instance two months, and in an exhausted subject, the affection is almost uniformly mortal. The gangrene, then, which originally was a primitive affection, is now acted upon by the internal infection and in its becoming secondary, it spreads without limit and the patient dies. The fever, therefore, is symptomatic of humoral depravation, which at a late period is irremediable. M. Ollivier imagines that the gangrenous virus, when it is fairly introduced into the circulation, may produce a secondary gangrene, in the same manner as the syphilitic poison occasions secondary ulcers or other symptoms; and he thinks this is proved by a remarkable case which he met with in the hospital at Carmona. But its poisonous quality of itself may cause death, without the production of any additional gangrene. Here the predominating symptom is debility, often in conjunction with irrepressible diarrhœa. But there have been recoveries from this state, in which case no other remedies are employed but pure air, ventilation, and charpie. It would appear, indeed, that ventilation is the remedy best adapted for the cure of the constitutional affection.

As to the *local phenomena*, which precede and accompany the cure of hospital gangrene in the first variety, the wound gradually becomes clearer, healthy granulations sprout up, and the circumference of the wound, instead of retaining its copper coloured hue, is tinged with a reddish colour: in short every thing is favourable. In the second and third variety, the sloughs fall away of themselves; but the process of depuration is here more tedious, as a much greater number of textures are affected all of which by no means send out granulations with equal vigour. The shreds of cellular substance seem to be separated first, and then in succession the cutaneous, muscular, and fibrous textures. In the last are included the aponeuroses, tendons, and ligaments. Where bones are affected, their exfoliation is latest. After the wound is healed there is always a loss of substance proportioned to the extent of the wound and the quantity of sloughs.

This disease has generally been considered as an accidental concomitant of wounds or ulcers, and consequently it is to be found as a separate disease in no nosological arrangement. Our

author describes it as a "traumatic or ulcerous and contagious gangrenous inflammation of the human body." M. Pinel, long ago, perceived the analogy betwixt it and ordinary gangrenous inflammation; and M. Recamier spoke of it as an irregular inflammation. No other surgeon or physician seems to have distinguished it sufficiently from ordinary gangrene. But on this subject the opinions of surgeons are very opposite. Pouteau, Dussossoy, Lassus, Vigaroux, Lombard, Cartier, Boyer, Portal, Deschamps, and Hibréard, give it a gangrenous character; and the same opinion has been lately adopted by Bujet, Chapuy, Lardomnat and Treille. Professors Percy, Richerand, Delpech, and MM. Guyenard, Aubry, Dupuis, Thomas, Granier, Mallet, Vautier, &c. are of a contrary opinion. The author gives eight objections, brought forward by the antigangrenists, all of which he refutes; and in a very particular manner exposes what he considers to be the absurdities advanced by M. Percy on this subject in the Dictionnaire des Sciences Medicales; and draws the conclusion that the disease is "a gangrene, preceded and accompanied by inflammation of a malignant nature", which appears to be the cause of local destruction, and of the spreading of the disease, and which should belong to the general class of gangrenous inflammation from an external cause. The characteristic of this is the *stupefaction* and extinction of the vital principle in those *denuded* textures which are its seat; and its ordinary causes depend on the action of putrid miasmata, and of a contagious matter, analogous to the effluvia which produce the different kinds of typhus. On this account, says M. Ollivier, I think no name will give a more exact idea of it than that of *traumatic typhus*.

The DIAGNOSIS of traumatic typhus is a matter of great moment, as changes in wounded surfaces, which are merely symptomatic of the lesion of some internal viscus, have undoubtedly been confounded with hospital gangrene, and this error in diagnosis has not only led to an improper practice, but has occasioned the loss of much precious time. We may be assured that the affection is not hospital gangrene, where the fever attending it has immediately preceded the changes in the wound, and when these changes follow the variations of the general affection, and disappear with it. On the other hand, the fever attending upon hospital gangrene, when it does appear, is posterior to it; and also the local disorders which have been previously, perhaps from twelve to twenty days remarkably severe. In short, every thing here indicates to the practitioner, that the fever is symptomatic of the local affection.

When a wound by severe accident, during sleep for instance,

has remained for some hours exposed to the air, it becomes covered with a kind of bloody slough, and puts on an appearance of unusual inflammation; and this has been mistaken for the hospital gangrene, when that disease has prevailed in the neighbourhood. This is a mistake of short duration. In consequence of some error in diet, or the application of some irritating substance to the wound, or a slight blow given to it, the wound assumes an unhealthy look, and has excited some fears of gangrene, but mild dressing or a cataplasm, have speedily dissipated the illusion. Intensity of pain is a most striking diagnostic.

M. Delpech informs us, that even skilful practitioners have been misled by the appearance of brown spots on the surface of a wound in consequence of some injury done to it; but these he observes, are always on a level with the surface; whereas, from the first moment, in hospital gangrene, when such spots occur, there is a manifest excavation.

One would imagine that it is hardly possible for the first appearances of a contused, or of a gunshot wound, to be mistaken for hospital gangrene, if the least attention were paid to concomitant circumstances; but such a mistake has actually been made by one of the principal surgeons in Paris. The absence of the general symptoms of scurvy should sufficiently distinguish it from scorbutic ulcers. At times, the erosions connected with syphilis, from their very much resembling the first variety, may deceive the unwary; but the history of the case, and the speedy relief obtained from mercurial preparations, will very soon dissipate the illusion. Some ulcers, from being dressed with topical applications, which have too much of a relaxing quality, or from any other cause, having assumed a degree of atony, put on an appearance something like hospital gangrene; but they have neither redness, pain, nor fœtor; and the application of some local stimulant in a very short time restores the part to a healthy action.

As several kinds of gangrene may be confounded with the second and third varieties, M. Ollivier is at some pains to point out the best mode of distinguishing them; and his remarks on this subject are deserving of attention. Some of them, at first, may deceive even an experienced eye, but a very few days will remedy the mistake; and indeed, if the history of the case is carefully attended to, such mistakes will hardly ever happen.

As to the PROGNOSIS of the disease, it is more or less favourable, according as the patient is more or less healthy in other respects, and according as he breathes a pure or an impure air, has wholesome or unwholesome food, or is kept in a cleanly or

uncleanly state; circumstances, in fact, which will apply to almost any other disease. The first variety is less dangerous than the other two. When the destructive process is rapid, when it extends to a great depth, and attacks the bones, the ligaments, and the bursæ mucosæ of the joints, and when fever appears early, with nervous symptoms, indicating an affection of the brain and spinal marrow, great danger is to be apprehended. It is equally so, when the fever has assumed the character of a gangrenous hectic, with colliquitive diarrhœa; and when, from frequent relapses, it is presumable that the animal economy is completely contaminated by the poison. The disease also will be fatal, when the body is greatly emaciated, and when there are profuse discharges, and much loss of substance. The danger is also aggravated when the disease is complicated with typhus, epidemic dysentery, &c., but the presence of syphilis does not seem to render recovery more difficult; for M. Ollivier has frequently seen open buboes attacked by it, without danger. He thinks that, in combination with confirmed scurvy, the disease must be incurable.

The disease has been met with in very different CLIMATES; it has been observed in St. Domingo, and the whole of Guinea; and well-marked cases of it have been seen at Thorn, on the Vistula. In the opinion of many surgeons, it prevails most in the great heats of summer, when there has been much rain. But others, among whom may be mentioned Baron Percy, attribute its production to cold and moisture; yet they adduce no facts in support of their assertion. But during the severe cold at Metz, in December, 1813, and January, 1814, M. Ollivier met with it, and in the excessive heat of summer, in 1810, under the burning sky of Andalusia. Indeed, from the facts brought forward, by the author, it would appear that the seasons have very little influence in producing it. However, he has seen it in Spain prevail most in very warm dry weather, and in situations where there was little or no cold or moisture. When the disease prevailed at Madrid, there was a constant dry and cold wind from the Guadarama mountains; and when, in Andalusia, the prevailing wind from the south-east was hot and dry, at times, indeed, almost suffocating. MM. Dupuy and Guinée have observed the same thing in other parts of Spain. The prevalence of the disease at the Hotel Dieu, was attributed by some to its situation on the Seine; but this opinion is unfounded, otherwise it would always prevail there. Neither will the author allow that marshy situations occasion it, although he admits that when stinking exhalations emanate from them, ulcers and wounds sometimes have an appearance not altogether unlike

it. He thinks, upon the whole, that if place have any influence, it must be attributed to a dry and elevated situation. It is known that when the atmosphere is in a highly electric state, infirm people suffer most from it, and on this account Professor Richerand imagines that such a state may be a cause of hospital gangrene. If this was the case, the disease would not be confined to hospitals. The opinion, however, deserves attention. Some have thought that the full moon had a malignant influence on hospital gangrene; but such influence has been by no means generally observed. It is very doubtful, also, whether this disease has ever prevailed epidemically in consequence alone of a general atmospheric cause; yet it would appear that such a cause may have rendered it more virulent. Being a local disease, and capable of being checked by separating the infected from the uninfected, it cannot with propriety be denominated an epidemic; and when the author gives it that name, he does not wish it to be taken in its most rigorous sense.

As to IMPURE AIR, he does not imagine that the effluvia of dead animals, unless in a highly concentrated state, are very deleterious; and he has not learnt that the disease was ever produced by the inoculation of putrid animal matter. The putridity of air, occasioned by a number of individuals being pent up in a very small space, is attended by far more fatal consequences. It may undoubtedly have given rise to the disease, when there are wounds and ulcers; but the author has seen hospital gangrene arise in the healthiest part of an hospital, and when the atmospheric air was apparently in the purest state. In such situations it must have been occasioned by its own peculiar virus, introduced on charpie, or in some analagous manner; or by a patient being brought to the hospital infected by the disease. Slight cases, however, have appeared, where no possible cause could be assigned for their production. Yet it is a fact, that air infected with miasmata, always aggravate the disease when exposed to its influence.

M. Ollivier next gives a long and minute account of two hospitals in the best aired and cleanliest of which the disease was very prevalent, evidently from contagion, whereas the other had hardly a single case of it, till some cases were introduced, on the breaking up of the hospital, when the disease in a short time raged with violence, and put on a much worse appearance, on account of the infected having been previously worn out by the long continuance of their wounds. The gangrene is always the more fatal, in proportion to the length of time that has elapsed, since the wounds were inflicted. When the wounds are recent, the patient's constitution is vigorous,

and able to resist the poison, or the suppuration is so abundant as to prevent its being absorbed. But when soldiers have been exhausted by fatigue and unwholesome food, or harrassed by misfortunes, the disease at the very first, will put on a malignant form. It is very doubtful if the effluvia from scorbutic, cancerous, or other ulcers, or from ordinary sphacelus, have ever caused traumatic gangrene; although M. Delpech seems to favour that opinion. Neither is it proved that the contagious matter of typhus fever or dysentery has ever produced it; but M. Delpech observed that the disease was severer and more frequent in wards adjacent to those in which patients were labouring under typhus fevers and dysentery. Indeed, he and MM. Duchamps and Percy imagine that the contagious matter of typhus is the same as that which produces hospital gangrene: but in this opinion M. Ollivier cannot agree with them, as it is repugnant to certain facts which have come under his own observation. Were it well founded, the one disease ought always to accompany the other; but in none of the situations in Spain, when hospital gangrene was so prevalent, did typhus ever make its appearance along with it except once at Madrid in 1809, at which time the gangrene was exceedingly mild, and seemed to have no connection whatever with the fever; nor could the author trace any connection betwixt them at Metz. M. Joly observed the same thing at Tolosa, in Spain. However, both contagions are of an animal nature, and both of these produce a contagious malady; but they act very differently on the human body. The contagious matter of gangrene is naturally in a liquid state, but capable of being made solid and of being evaporated; but that of typhus is for the most part in a gasious form. M. Ollivier is also, clearly of opinion that the miasmata of dysentery never produces hospital gangrenes. Can air, vitiated by the effluvia of traumatic gangrene, propagate the disease? The author imagines that this happens very rarely; at least, if the distance is considerable. In small crowded wards, however, the gangrene may undoubtedly be transmitted from one patient to another in this manner. The effluvia of marshes and of stagnant waters, in which vegetable substances have putrified, undoubtedly predispose to the disease.

Among the CAUSES which are NOT VIRULENT, ointments may be enumerated, as certainly predisposing to the disease, if they are applied in a rancid state, or allowed to remain so long on newly-cauterized parts, as to become rancid; but if the ointment is fresh, and if at every dressing it be carefully cleaned away from the edges of the wound, they will serve to defend the surface from charpie which has been infected. He thinks that

linen and other materials used for dressings, when damp, or ill-washed, or stinking, if they do not produce it, will at least aggravate the disease. M. Vautier has seen hospital gangrene prevail almost universally, from the use of washed charpie, which had already been used in dressing wounds. In this case, after washing, the virus must have still lodged in the charpie. The mechanical irritation of wounds, particularly when it is accompanied by the rupture of vessels, favours the attack of hospital gangrene; in cases where it would appear that the granulations of the wound had defended it from the gangrenous virus. M. Dussossoy tried in vain to impart it to a cancerous ulcer, till with the forceps he ruptured some small vessels, when the virus was speedily communicated. The author gives several instances of wounds, which had been doing well, becoming gangrenous from accidental hurts by the applications of inexperienced surgeons. The opinion that hospital gangrene is not contagious, has, he thinks already done, and will still do, much mischief.

Among the experiments and observations which seem to prove that hospital gangrene is *not contagious*, we may mention that M. Thomas not having been able to communicate the disease to rabbits, though he tried in various ways to contaminate their wounds with its pus, concludes that it is not contagious. M. Percy draws the same conclusion, in consequence of his having introduced dogs, affected with wounds, into the wards where the disease was prevalent, and exposed their wounds freely to the air without effect. M. Ollivier will not allow the legitimacy of these conclusions, as he does not think that what is contagious to man must necessarily be so to animals; and we agree with our author that nothing positive can be concluded from this, though it amounts to a high probability.

In regard to the observations made on man; to prove its non-contagious nature, M. Dupin says he knew a Spanish surgeon who used to dress cases of the disease, when his fingers were full of chops, and yet he was not infected. M. Dupuytren, according to M. Thomas, placed the matter of hospital gangrene upon a healthy wound, without any bad effect. M. Richerand has done the same thing with a similar result. M. Percy gives seven experiments made by M. Willaume at Madrid with gangrenous virus, on the sound skin, on a part of the skin where a sinapism had been applied, on a blistered part, on a scalded thigh, on ulcers the consequence of gun-shot wounds, and by inoculation on the integuments of the back, without any effect whatever. In opposition to these, the reader may be referred to the experiment by M. Dussossoy, on a cancerous ulcer, which we have already mentioned.

The author next examines the observations and experiments which prove that the matter secreted by ulcers attacked with hospital gangrene *is contagious.* Pointe, who published on the disease in 1768 gives various instances of its being communicated by means of linen which had been employed in dressing the gangrenous ulcer, and of charpie which merely had been prepared in an hospital where the disease was prevalent. Pouteau thinks it not so contagious as the small pox or the plague. MM. Danillo and Clerc give instances of infection occasioned by their instruments, which they had forgot to wash, after using them to dress wounds affected with the disease. The observations of M. Vautier, also, on this subject are very striking, and one of his cases shows that a slight scratch with a pin, which had fastened the bandage of a gangrenous wound, may produce infection. M. Delpech gives an instance where the infection was propagated by the surgeons, at a distance from the hospital.

But none of these, in M. Ollivier's opinion, are capable of proving the contagious nature of the gangrene; and in spite of these, anticontagionists may assert that the disease is epidemic and not contagious. It must be proved by a direct inoculation, made with virus taken from its source, and inserted into an individual who is not exposed to the ordinary epidemic causes which prevail in hospitals; an individual, indeed, who is in good health, and altogether independent of every cause which could, in every other manner favour the production of the disease.

To ascertain this disputed point, he determined to inoculate himself, and he made the inoculation with a lancet, that no serosity might dilute the matter and lessen its activity, and because it would thus enter more easily the orifices of the divided vessels. At the time of inoculation, the author was residing at Carmona, where the hospital had been long free from gangrene; and matter for the purpose was obtained at Ecija. It was taken from a case of the very worst description and was inserted near the humeral attachment of the deltoid muscle of the right arm by M. Ganderax, in presence of all the surgeons of the medical staff at Ecija. He made three punctures and each time before withdrawing the lancet, he moved it slightly, that it might leave the matter with which it was charged in the wound. The author was then in his twenty-first year, of a very nervous constitution, but otherwise in pretty good health. The operation was performed on the 17th of October 1810, at six in the morning. During the following days he was on the road from Ecija to Carmona, and felt no inconvenience. On the 19th, a vesicle with a red areola made its appearance. It would be

tedious to enumerate all the steps of the process; suffice it to say by the 22d the part had put on all the appearances of the second variety, and had affected the glands in the axilla; and probably would very soon have assumed those of the third, had not all the sloughs been removed, and the surface rubbed over with liquid nitrate of silver bedded with the same substance in powder and then covered with a pledgit of charpie dipped in camphorated spirit of wine, which arrested the progress of the gangrene. For some days he had suffered much pain and had slept none, but on the night of the 23d his sleep returned. On the 24th, fearing the bad effects from the absorption of the virus, in consequence of the axillary gland being swelled, he took bark. In the mean time, the wound was dressed regularly, it was occasionally touched with caustic and had a pledgit with camphorate spirit applied to it. It was not cured until the 28th day. During its whole progress, the author had no fever whatsoever, his appetite was good and he could have taken his usual exercise, had not the arm felt much pain from motion. When the bandage became dry and hard and the wound painful, he always found much relief from moistening them with camphorated spirit; for it would appear that gangrenous inflammations demand such treatment and that they are hurt by emolients. In this case, the application of caustic made the gangrene disappear in less than two days. This experiment, says the author, seems undoubtedly to prove the contagious property of traumatic gangrene. The facts which seem to oppose this conclusion most assuredly depend on some peculiarity of constitution, or some favouring circumstances which enable certain individuals to resist, in general, every kind of infection.

M. Ollivier thinks it extremely doubtful if hospital gangrene ever makes its appearance in the wounds of internal organs, from the patient's breathing the corrupted atmosphere of an hospital.

The author thinks that aliments, or even spirituous liquors, can only, at the very utmost, predispose to the disease. A very remarkable diminution of purulent secretion, when the wound is nearly healed, may be considered as a predisposing cause of it, as the virus is thus applied in a much more concentrated state. All the depressing passions may be considered as predisposing causes; and he thinks it probable, that too much sleep, or the want of exercise may predispose to it. He believes that the disease is common to both sexes, and, with regard to temperament, he thinks it can have very little influence in contagion of any kind.

We know in some instances the manner in which contagious diseases are propagated, but the causes of their formation or

their origin, will perhaps be hidden from us for ever: in this respect we know more of hospital gangrene than of most others. In many instances, it seems to be produced by the combined influence and concentration of various miasmata; yet in other cases it shows itself in the purest air, and in the midst of circumstances that seem most unfavourable to its production

To hinder the PRODUCTION of the gangrenous virus, he recommends that the wards should be frequently ventilated, that fires should be lighted up unless the weather be very warm; and that the floors, if of stone, should be washed once a week and immediately dried. He prohibits the use of curtains. When the weather is warm, vinegar may be frequently sprinkled through the wards, aromatic fumigations may be used, and camphor may be allowed to evaporate in various parts. The greatest cleanliness should be observed, the wounds should be regularly dressed, with charpie and linen that have not been exposed to contagion and which are quite dry.

In order to find out a mode of annihilating the virus, M. Ollivier inoculated himself again, with matter which had been mixed with an equal part of camphor; and no infection followed; whence he concludes that camphor has the power of neutralizing it.

The surgeon, if he has been dressing hospital gangrene should change his clothes, wash his hands with soap and water, and dip them in camphorated vinegar, before proceeding to dress healthy wounds, that he may keep them from contagion. Every precaution should be taken to clean the instruments after each dressing; and the inside of the forceps, in particular, should have a fine polish. Wounds should be dressed as quickly as possible, and one part after another. Too much attention cannot be paid to the preparation of charpie new or old. A basin should be carried round with the surgeon to receive the dressings taken from the wound; and after each wound has been dressed, the basin should be emptied into a basket on the outside of the ward; and the whole should be burnt or buried after each general dressing. The basins should be carefully washed each time. He is much dissatisfied with those surgeons who give it as their opinion that a simple washing in hot water is sufficient to disinfect linen or charpie.

Patients infected with the gangrene should be kept in a ward apart; and there should be a kind of lazaretto ward to receive those whose cases are doubtful. As little wearing apparel as possible should be kept in the gangrene ward. MM. Percy and Delpech, doubt the propriety of separation; but M. Ollivier seems to have answered their objections triumphantly. I cannot, he

observes, insist too much on this point, that a *complete separation* is sufficient to arrest the contagion; for we see it almost always proceeding successively from the infected beds to those which are adjacent.

He disapproves of fumigations made with oxygenated muriatic gas, as it cannot be employed in a quantity sufficient to destroy contagious effluvia, without, at the same time, being injurious to life; but he approves highly of nitric fumigation, made with purified nitric and concentrated sulphuric acid. This, as our readers well know, has been found eminently serviceable in England; and our author informs us, that it was used with great success at Seville, in the cure of the yellow fever. Half an ounce of each, he tells us, is sufficient for a room ten feet square; and if we need to fumigate a large ward, he recommends that a number of glasses containing the above-mentioned quantity, and in proportion to the size of the room, should be placed in different parts of it. The acid is first put into the glass, and the nitre being gradually added to it, the whole is stirred with a glass rod. The doors and windows of the ward should be shut during the fumigation, and opened in the course of a few hours, or immediately afterwards. The fumigation should be used more or less according to the intensity of the contagion; and in greater quantity in those parts, when the air is most stagnant.

To render the wounded less susceptible of infection, they must breathe a pure air, be allowed a moderate use of wine, and have a good nourishing diet. Their bowels must be carefully attended to; and patients who are of a weakly constitution should be put on the use of some mild aromatic bitters. If the granulations become pale and fungous, they should be touched with astringent stimulants.

Antiphlogistic remedies, particularly emollient cataplasms, are injurious. If MEDICINES, which have been called antiseptic, have no such virtue in hospital gangrene, it is not to be expected that they can have it in any other kind. The author has tried tinctures of myrrh and of aloes, opium, bark, sal ammoniac, turpentine, charcoal, vinegar, citric acid, carbonic acid gas, fermenting in dough, mineral acids much diluted, alcohol, aromatic and honied wine, liquid storax, powdered chamomile, oxyd of manganese, black oxyd of mercury, borax, and cream of tartar, without any benefit whatever as antiseptics; whence he reasonably concludes that other remedies of the same kind which have been much extolled, have in reality as little efficacy as the above. Turpentine (the resin and essential oil united), he thought had a decided effect in relieving pain. Camphor may be useful sometimes, but in general it does little good. In the very

commencement of the complaint, it may have the effect of neutralizing the poison, or it may prevent a relapse, after a cure has been obtained. A cure has oftener followed the application of dry charpie alone, than any antiseptic whatever. Is this to be attributed to the charpie? No, certainly, but to the spontaneous efforts of nature, which in simple cases, cure the local affection in a larger or shorter space of time. Charpie, therefore, furnishes a standard, by which the value of other local remedies may be estimated. When the wound is becoming clean, some gentle tonic may be required in addition to the charpie, when the efforts of nature are too languid. Probably, the best is camphorated alcohol or camphorated acetic acid.

Every practitioner has his favourite remedy, of which he boasts the undeviating good effects; but in none of the writings hitherto published on this subject do we find any accurate observations, to establish the superiority of one medicine over another; we have nothing but vague assertions destitute of proof; and the medicine so much extolled by one man is rejected by another, as altogether useless. What, says the author, are we to think of such contradictory opinions? "They probably depend on this, that the greater number of surgeons, without attending to nature, have attributed to their own remedies, what has really been the result of its efforts; so, when all circumstances are unfavourable, nature overpowered becomes weak, and these remedies being of little or no value, the patients die, I will not say *in spite of*, but certainly *during* their administration. In the hospitals of Madrid and Atocha, I attended a hundred cases of hospital gangrene, of which only one died. They were all cured from the 12th to the 20th day, and nature cured every one of them."

M. Ollivier attributes the honour of having first used oxygenated muriatic gas in fumigation, as a local remedy in the cure of hospital gangrene, to our countryman Dr. Rollo; but he thinks that the success which he obtained was more owing to the escharotics he employed than to the fumigation. So little, however, was Dr. Rollo aware of this, that he advises an instantaneous application of the gas, lest, otherwise, it should prove too caustic. On this subject the author has given several extracts from the publications of Drs. Rollo and Carmichael Smith. He regrets that so valuable a remedy should have been so little used in France, especially as in many instances it might supersede the necessity of applying caustic.

From the earliest times, the actual CAUTERY had been recommended in the cure of those gangrenes which had resisted every other application; but he thinks that Pouteau was the first who

hinted at its probable advantages in the cure of hospital gangrene. Dussossoy and Cartier were the first who actually employed it, but only in desperate cases, after they had exhausted every kind of antiseptic, and when the case was hopeless. M. Ollivier imagines that he himself, in 1810 and 1811, was the first who showed, *ab experientia*, the possibility of instantly arresting its progress at pleasure, in the first variety or even in the second, by means of caustic remedies, or with the actual cautery; a method which preserves wounded men from lengthened sufferings, from mutilation, and from death. In proof of this he gives his experiments with a variety of ESCHAROTIC REMEDIES; of all which, in his opinion, the nitrate of silver is the best, and the one which he has oftenest used. He has also employed, alum, corrosive sublimate, red precipitate, concentrated sulphuric acid, and oxygenated muriatic acid, with advantage. Caustic potass, from its action not being so easily commanded, does not seem to be a favourite remedy with him. Sulphate of copper will cure the disease, but he thinks it should not be used rashly, from the risk of its poison being absorbed. The same objection may be made to preparations which contain arsenic, as the collyrium of Lanfranc. Camphor, he thinks, may be of service in very recent cases.

The ACTUAL CAUTERY is the best suited to hospital gangrene, as it produces the driest slough or eschar; and in many cases, no other remedy can with propriety supply its place. Before using it, the wound should be cleared of sloughs and made quite dry with charpie; and the cautery should be applied in such a manner as to make the patient feel pain over every part of the surface. We should touch the edges of the wound only when they are in immediate contact with the solution of continuity; or where they have assumed the dark red or violet colour, so often the forerunner of gangrene. The cautery often proves the best of anodynes. The eschar should be removed forcibly at the first dressing, and the cautery applied again, unless appearances shew with certainty that the gangrene is stopped. The author is surprised that M. Delpech has not recommended the removal of the eschar. These eschars, he concludes, are perfectly inert bodies and not contagious; otherwise relapses would be almost constant. To prevent this, topical stimulants and antiseptics should be employed; and of these, perhaps, the best is camphorated vinegar, in which every part of the dressings may be steeped with advantage. The cautery must not be used, when the gangrene is near a principal arterial trunk; and in desperate cases, he says, it should not be used at all. The colour of the cauterizing instruments, when applied, should be a white red *(rouge-blanc)*.

When the gangrene is secondary, all local remedies are useless. It is not necessary that we should discuss the question of amputation, which he has examined at great length, this being a matter well known to the generality of British surgeons. He disapproves of the excision of the gangrenous parts, unless as a preparatory step to cauterization.

In the GENERAL TREATMENT, both local and general bloodletting are prescribed; but if the patient is affected with any internal inflammation, it is allowable to use a moderately antiphlogistic regimen. In old gangrenes the patients must be supported with nourishing food of easy digestion and with some good wine; which are necessary to enable them to undergo their fatiguing dressings. If they are weak, bark is certainly useful as a tonic, but it seems to have little or no effect on the progress of the gangrene. Accidental symptoms must be treated according to general principles. What we have recommended as prophylactic will apply here.

We have little room to speak of the general merit of the work, It is written in a plain easy style, and contains numerous cases and many valuable remarks; but it is diffuse, and consequently contains several repetitions; from which last we are afraid our analysis is not altogether free. We are pleased with the author's frankness; we have every confidence in his facts and we are happy to bear witness to his erudition, a quality not very common though it is often assumed by medical writers of the present day.

FRANCESCHI'S CLINICAL REPORTS *.

THE object of this work is to show the principles adopted, and the manner in which medicine is cultivated in the school to which the author belongs. In his hospital, he has followed the method adopted in the best schools, of selecting such a limited number as to admit of the perfect and satisfactory observation of cases. He does not give any comparative view of the deaths and cures, but states that only one case of acute disease was lost, and that in the rest of those who died, dissection showed insuperable changes of structure. Some observations on the present state of Italian medicine are prefixed to the work itself, but of

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*Annali di Medicina practica compilati nell' Istituto Clinico del R. Liceo Lucchese, da G. Franceschi, Professore di Terapia speciale, &c. &c. Amo primo. Lucca, 1821.

these we shall only quote the last conclusion, "that a few general notions excepted, every thing in medicine is subordinate to observation and fact; and that in spite of all that has been lately done, every thing, with a few modifications, consists in imitating our great masters".

All diseases are divided in this school into general and local; into hypersthenic, hyposthenic, and irritative; and are comprised in nine orders, namely; febres, phlegmasiæ, exanthemata, profluvia, cachexiæ, retentiones, impetigines, neuroses, and locales.

On the subject of INTERMITTENT FEVERS, the author's conclusions are, that they arise not only from marshes and in bad air, but also occur, in certain years, in the most healthy places, from an unknown atmospherical constitution. That they are not dependent on the deficiency or bad quality of food, as they occur in the most prosperous years, and in individuals who suffer no privations. That the greater number of intermittents are hyposthenic and complicated with gastric derangement. That a treatment on the supposition of their asthenic nature is often followed by conversion into malignant fevers. That there are intermittents accompanied by affections of the skin, as urticaria, &c. and requiring bark to effect a cure. That bark is the principal remedy in hyposthenic intermittents. That nothing is more effectual in curing the disease and preventing a relapse, than bark joined with tartar emetic. We may remark, as the author seems not to be aware of it, that the latter is decomposed and becomes inert by such a union. That nervous symptoms accompanying the febrile access are relieved by the use of opium, in addition to the usual means.

Fourteen patients were admitted into the hospital with fever complicated with gastric derangement; these the author considers as irritative, and neither hyper nor hyposthenic; but we confess we cannot see the value of these fine drawn distinctions; these he treated by evacuants, principally purgatives, preferring the saline in subjects inclining to asthenia; the oily where there was tension or pain; and aloes, &c. where there was decided asthenia.

There were several patients affected with simple typhus; in some there were bilious symptoms, and in one unfortunate case considerable gastricism with great prostration. The treatment was not uniform but varied according to the causes and complications; thus gentle corroborants, where the disease was the effect of preceding evacuations; emetics and purgatives when the disease was complicated with gastric derangement producing prostration.

In the many cases of synocha treated in the hospital, besides blood-letting and low diet, evacuants also were employed, from its frequent connection with gastric derangement; nauseating medicines were useful in diminishing excitement, and restoring secretion.

The most serious case of CYNANCHE was tonsillar, and successfully treated by general and local blood-letting and corresponding contra-stimulants. The author asserts that this disease is a most serious one, from the rapidity with which it may terminate fatally; that pure cynanche is best treated by bleeding to deliquium and nauseous medicine; that like other erysipelatous inflammations, it sometimes arises from intestinal disorder and requires emetics and purgatives; that when it is the consequence of contagion, blood-letting cannot be employed to the same extent as in other cases; and that when there is invincible induration, it is only to be cured by extirpation.

The hospital presented examples of all the degrees of PNEUMONIA. The depletion of blood was regulated more by the degree of plethora than by the degree of excitement, trusting in the treatment of this diathesis rather to passive contra-stimulants, to sub-acid drinks, and to time, than to detractions of blood, without, however, losing sight of the possibility of deception as to the absence of plethora. Nausea produced by emetic tartar was very useful in diminishing the excitement remaining after blood-letting; contra-stimulants were more employed in the state of asthenia and phlegmasia. Laurel water, prussic acid, and digitalis were not employed, from the fear, that whilst they produced an artificial depression of strength, the inflammatory process might remain unchecked. Blisters were not used during the orgasm of the disease; in pneumonia from gastric affection, evacuants were thought more proper than bleeding; leeches were considered useful in pleurodynia or rheumatic affections of the muscles of the thorax.

In one case of ANGIOITIS, the arch of the aorta, and the right carotid were found of a purple colour, shewing the inflammation which had affected them, and which extended even to the brachials and descending aorta. In another, though not so violent, the inflammation was more diffused, affecting the smaller arteries, particularly at their divisions. Both cases resisted blood-letting and sedatives in unusual quantities The author considers this as not an uncommon disease, and supposes that a certain quickness and hardness of the pulse, accompanying or following inflammatory diseases, are to be attributed to a phlogistic irradiation, extending more or less in the course of the vessels from the inflamed part. He concludes that angioitis

is a phlogistic process of the vessels of arteries and veins; that this state is sometimes joined to a diathesis of excitement, (*diatesi di stimolo,*) at others is the consequence of a peculiar alteration of the vessels themselves; that when this pathological condition exceeds the diathesis of excitement, blood-letting should not be pushed far, whilst the solution of phlogosis is rather the work of time—of diluents and sedatives employed with moderation; that substances which pass unchanged into the circulation, are to be feared from their irritating the inflamed vessels; and that polypi of the vessels are an inflammatory product similar to false membranes, and not, as some suppose, formed in the last moments.

Few patients were admitted into the hospital in the advanced stages of TABES PULMONARIS, which the author considers as the compound effect of original structure and accidental causes, acting on the organs of respiration. According to him the first stage is always attended by inflammation, and is to be treated by blood-letting, certain sedatives, and diet; it is in this stage only that medicine can effect any thing. He states that sedatives are useful only in removing the remains of excitement, or the phlogistico-pathological change which may exist before suppuration has taken place; that the recurrence of arterial vibration after having been reduced by sedatives, particularly digitalis, is a proof of the existence of organic change, and of the inefficacy and noxious effects of these remedies; lastly, that opium affords the only means of relieving the cough, sweats and diarrhœa of the last stage. On the subject of the contagion of phthisis, Professor Franceschi thinks, that though without influence on some subjects, in others it may excite a scrofulous inflammation of the glandular system, and produce phthisis.

Three cases of SPINITIS are recorded. The first was the consequence of rheumatism, excited by exposure to cold. The bladder and lower extremities were paralysed. An issue restored the powers of the former completely, and of the latter partially. In the second case the extremities had become torpid after a fall on the back. The patient was treated without success by spirituous frictions and rubefacients, and left the hospital at his own request. The cause of the third was unknown; it proved fatal, and the dissection showed that the medulla was almost wholly destroyed from the first dorsal vertebra to the sacrum; the membranes were inflamed and the bladder much contracted.

Two cases of DIABETES were treated in the hospital. In these the Professor says that a decided diathesis of diminished excitement existed, (*diatesi di controstimolo.*) They presented de-

pression of the vital forces, tardy circulation, and most decided emaciation. A stimulant treatment was accordingly adopted, opium being chosen and given to a decisive degree; one patient took 888 grains in 42 days, and another 1795 grains in 36. It is remarkable that in one of these cases, the strength was rapidly reduced, and the diabetes reappeared, when nausea occurred from worms; in the other, the disease was aggravated by depressing passions. He subjoins some very interesting facts communicated by Krimer, who states, that the continued use of rye flour makes dogs weak and lazy; that a discharge of mucus takes place from the eyes, and that the quantity of uric acid in the urine diminishes, the albumen and mucus being increased in proportion; the Voltaic pile, (we are not told the manner of its application,) dissipates these symptoms, and restores the animal to health. The same symptoms occur from the use of rice. The urine of diabetic patients does not communicate the disease when drunk by animals. On the appearance of sugar in the urine, the urea disappears wholly, or in part. If the syrup of diabetic urine be injected into the veins or stomach, the blood and urine afford traces of sugar for some time; the Voltaic pile causes it to disappear, and it seems to be expelled by pulmonary transpiration. When bile is injected into the blood, the urea disappears, and the animal becomes dull. He thinks that some grains, as rye, oats, rice, depress the action of the nervous system, particularly of the eighth pair, and at the same time that they render the urine cloudy, diminish the quantity of the substances peculiar to it, these being replaced by others, as albumen and the colouring matter of the blood. Krimer has found that common sugar injected into the veins or stomach is not to be met with in the blood or urine; this is not the case with diabetic sugar; hence he concludes it contains some unknown principle. He considers that the appearance of the sugar by the organs of respiration, tends to prove the analogy of their functions with those of the kidneys.

Professor Franceschi divides hemorrhages into hyper-, and hyposthenic, and local; there were cases of all in the hospital. He does not consider pneumorrhagia from plethora, or vicarious, or symptomatic of phthisis, as hemorrhage properly so called, but rather as a disease to be feared on account of the inflammatory process which causes it, than from the quantity of blood lost. The treatment was regulated by the nature of the causes, and one case of pneumorrhagia is related, which was treated by repeated bleeding, ipecacuanha, digitalis, and manna with soluble tartar. Speaking of passive hemorrhages, and first of melæna, the author states that he cured this affection in an hypochon-

driac with obstructed viscera by gentle evacuants, as oils, tamarinds, and cream of tartar.

The case of a woman is related who was tapped for a supposed DROPSY; pure blood issued with the same force, and in the same manner as water in common cases. Twenty-two pounds were evacuated without debilitating the patient. In the course of some months the menses which were originally suppressed, not having reappeared, twelve pounds of sanguinolent fluid were evacuated by a second operation. This interesting case was terminated by the restoration of the functions of the uterus, principally by the use of aloes, sulphate of iron, and semieupia.

The author considers CHLOROSIS as being sometimes a cause, at others an effect, of suppressed menstruation, and attempts to prove it, by comparing the disease, accompanied by languid action or hyposthenia, and its symptoms, with the effects of the accidental suppression of the menses in healthy individuals. In the former he employed iron, generous diet, exercise, country air and amusement.

PHYSCONIA he describes as a slow phlogosis of the parenchyma of the abdominal viscera, increasing their size, sensibility, and consistence; he excludes steatomatous or adipose tumours formed in the omentum, mesentery, &c. These enlargements of the liver and spleen, we are told, are very common in his country from the frequency of intermittents, and the marshy, damp climate. One case of hepatic physconia was removed by means of sulphate of iron, as the symptoms depended on inertia of the liver; and another by the removal of a convulsive state, by the return of menstruation, and by the sulphate of iron.

In its chronic state, the only form of icterus seen in the hospital, was derived from a temporary or permanent obstruction of the biliary ducts. Three cases are recorded. One was produced by hepatic obstruction, the consequence of impeded menstruation, and was treated by castor oil, leeches to the anus, whey, calomel, and a stimulant mixture with laudanum, to relieve convulsions which happened with a small pulse. In the other two cases the disease was the consequence of obstruction of the common duct; in one it was treated by rhubarb and soluble tartar, in the other by oils, cream of tartar, manna, and calomel; these were successful rather by evacuating the bowels, which were costive, than by their direct action.

Professor Franceschi divides SCROFULA into *declared* and *occult*; he considers it as hereditary, and propagated by peculiar organization, and not by any particular principle; he treats it with contra-stimulants, as cicuta, aconite, muriate of barytes, sea-

baths &c. the circumstances being rare in which plethora or phlogosis require blood-letting; when the phlogistic process is subdued, bitters and chalybeates are useful by restoring energy to the system.

Lues venerea is described as a specific contagion, acting particularly, though not exclusively on the glandular system; as being distinct from that of gonorrhœa, and not to be prevented before the appearance of symptoms, though most readily cured afterwards by the use of mercury.

Neuroses are divided into two classes; convulsions characterized by irregular motions; and paralyses, by difficulty or impossibility. A case is related of convulsions arising from uterine plethora, which resisted bismuth and aconite, and was cured by leeches to the pudendum, calomel, &c. A case of purely nervous palpitation was removed by opium and good wine, and in another instance of abdominal pains, constriction of the fauces, aphonia, dilitation of the pupils, were relieved on the evacuation of some worms by means of castor oil and gamboge.

The author divides Medicines according to their action, into stimulant and contra-stimulant, retaining the name *specific*, for some which are proper in particular forms of disease, and of which the action is unknown. Stimulants not being constant in their mode of action, are divided into diffuse and permanent, absolute and relative. When stimulants in their action exceed the sensibility of the parts, or are applied to parts not accustomed to their impressions, they become irritants. It cannot be denied that in stimulants and contra-stimulants there is a special action on individual organs, so that particular remedies are preferable to others in the affections of particular parts. Contra-stimulants are either direct or indirect. If the action of some remedies of this class is such as to remove substances that are unassimilable, and that disturb the equable excitement of the system, such remedies may be considered as anti-irritants, He tells us that some medicines were employed in combination and with success, which are commonly considered, (at least in Italy) as having opposite actions, such as opium and ipecacuanha, laudanum with oils, &c.

We have preferred, in this article, to allow the author to speak for himself, convinced that a perfect idea of the present state of Italian medicine cannot be acquired in any better way than by attention to clinical histories, which render us, as it were, spectators, rather than distant and indifferent auditors. Some of the pathological divisions and opinions furnish much matter for reflection, though in general, as with most of his countrymen, they are but modifications of the doctrines of Brown. The practition-

ers of this country may claim the honour of having employed the same means, and acted in many respects on the same principles at a much earlier period, with this additional advantage that they have shaken off the yoke of system and adhered to observation, experience, and the general principles deducible from them. The Italians pursued a different and somewhat erroneous path, but even their errors have tended to set them right, and both parties, from different points, have in the end approximated to the same principles.

FORSTMANN ON THE EFFECTS OF FASTING *.

The introduction to this small but comprehensive work, contains some general observations on the good effects of an abstemious diet; and amongst these we have a short sketch of the Venetian senator, Cornaro's life, who, in his hundredth year, published his well-known book, so highly praised by Mr. Abernethy "Della Vita Sobria". The first part of that singular man's life, till his fortieth year, resembled, as is well known, that of the modern debauchee, whilst the latter reminds us of that of the nations, who, contented with a spare diet, live agreeably to the simplicity of the earliest times. Thus, for the greater part of the year the Hungarians eat no animal food, and at all times live very temperately; and in consequence are strong and healthy, and live to a great age. By temperance, the Arabian, in his burning desert, is possessed of great strength; and by imitating this plan Niebuhr was the only one of six European travellers in that country who escaped death—a fact which is of considerable interest. The Hindoo also, lives sparingly on rice, vegetables, and fruit; and it is, without doubt, to this simple diet that we must attribute the good health which he usually enjoys. "Homo enim sanus", says our author, "neque famelicus, unius et simplicis cibi generis raro plus justo sumet: varietate autem, et condimentis et exquisita coqui arte illectus, triplo plus quam debet sese onerabit". It is said that the aborigines of the West India Islands, at the time of their discovery by Columbus, being themselves naturally an abstemious and healthy people, were astonished at the quantity of food that a single Spaniard was in the habit of devouring.

With Pythagoras, the first law of society was abstinence; for

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* De Jejunio Salutari. Auctore Friderico Forstmann. Bonnæ, 1822.

he judged wisely that the mind is capable of far more nobler flights when it is completely emancipated from the tyranny of the palate. And in conformity to this sentiment, Homer thus speaks of the Gods.

> Nor food they eat, nor drink the dark-red wine:
> Thus they are bloodless and are called immortal.
>
> *Rev.*

Among the disorders which luxury has introduced into more civilized states, not the least numerous are those originating in gluttony; than which nothing so immeditately deteriorates the frame of man or debases the faculties of his mind. But now-a-days gluttony is not disgraceful; for it is a part of modern elegance to have a table sumptuously supplied; and the man who lives temperately in all things is viewed with wonder. Even physicians are not always enemies to good eating, and Dr. Francis Home, in his Principia Medicinæ says, Prodest bis vel ter die, potius quam semel, cibum capere; et *semper quamplurimum*, dummodo hunc concoquat ventriculus. Most diseases, however, arise from this source, and Seneca has said Visne numerare morbos, coquos numera. The observation, indeed, that too much food produces disease is as old as Hippocrates; and, also, that its cure is abstinence. Yet this is often neglected by physicians, who seldom have the courage or the candour to say to their patients what Sir Charles Scarborough said to the Duchess of Portsmouth, "eat less, use exercise, take physic, or be sick." But the highest degree of abstinence, *inedia*, or the abstaining from food entirely, in ordinary cases is attended with very bad effects and sometimes occasions death. "Quin et multum abest", says Gregory in his Conspectus "ut defectus appetitus, et quæ inde sequitur inedia, ægris, præsertim acutis morbis decumbentibus, tantum noceat, quantum similis inedia sano homini noceret".

The author now favours us with a correct description of the phenomena usually attendant on INEDIA; but which are too well known to require a full enumeration. When a person has fasted for a short time only, his mind is usually more active and more susceptible of impressions, but at the same time it is more volatile. It soon, however, becomes steadier, and, if we except the attendant languor, it enjoys the same cheerful serenity that follows a moderate dinner. At a still longer interval, the fauces, which seem to be much more sensible of hunger than the stomach, become lined with mucus, and afterwards quite dry, as in a very short time every kind of secretion in the cavity of the mouth, and from the adjacent glands, ceases. Now the breath

becomes fœtid, and there is nausea, and not unfrequently vomiting, particularly when there is an attempt made to swallow.

The pulse becomes slower and weaker, although motion and labour easily excite it to greater quickness. The body is keenly sensible of cold. The muscular strength fails. Several of the secretions cease; and the bowels are no longer moved, although they may contain both bile and fæces. The emaciation is extreme; and it often comes on very rapidly, a person having been known to lose the weight of four pounds in twenty-four hours. Hectic fever soon supervenes.

Such is a brief outline of the general phenomena, which, however, vary according to the age, constitution, and state of mind of the sufferer. He who wishes to die of hunger, for a long time expects death patiently and in silence; and the religious fanatic, pretending to be under a miraculous influence, lies sleepless on his bed, but with a cheerful countenance, even after he is unable to move a limb without assistance. Both of these obstinately refuse food.

A curious case of voluntary fasting is given in the tenth volume of Hufeland's Journal. A recruit, to avoid serving, had cut off the fore finger of his right hand. When in the hospital for the cure of the wound, from a dread of the punishment which awaited him, he resolved to starve himself, and on the 2nd of August began obstinately to refuse all food or drink, and persisted in this resolution till the 24th of August. During these twenty-two days, he took neither food, drink, nor medicine, and had no evacuation from his bowels. He had now become much emaciated, and his belly a little distended, he had a violent pain in his loins with great febrile heat, his thirst was excessive, and his behaviour had become timid. Having been promised his discharge without suffering punishment, he was prevailed upon to take some sustenance, and weak broth was tried, but his stomach would only bear luke-warm drinks.

Under careful treatment, he continued for a week to recover, when on the 1st of September he got a wild look, and again refused food. Till the 8th he took a little barley water about every three or four days. From the 8th to the 11th he took a little biscuit and wine; but from this till the 9th of October, a period of twenty-eight days, he neither took food nor drink, nor had any natural evacuation. From this to the 11th he again took a little nourishment and began to recruit, when he finally renewed his resolution to starve himself, and persevered till his death, which happened on the 21st of November, after a total abstinence of 42 days.

When the abstinence is not voluntary, the mental energy de-

cays as the body becomes emaciated; but the pangs of hunger soon rouse it to madness and convulsion. The poet represents Ugolino and his sons undauntedly expecting a lamentable and involuntary death.

Ed io sentj chiavar l'uscio di sotto
All' orribile torre: ond' io guardai
Nel viso a miei figliuoi, senza far motto:
I' non piangeva, si dentro impietrai:

Quetá mi allor, per non far gli più tristi
Quel di e l' alltro stemmo tutti muti:
Ahi dura terra, perche non t' apristi?

Dante.

And underneath that dreadful tower
I heard the gate for ever close; and then
I gazed upon my sons, but nothing said:
I shed no tears, firm as a rock my soul:

I then was calm, not to increase their woe:
That day, and even the next, we all were mute.
Ah cruel earth, why didst thou not engulph us?

Rev.

Some appear to suffer little pain, whilst others are in great torment; but in general the most distressing symptom is an inexpressible feeling of anxiety. It is thirst, however, for the most part, rather than hunger, which is troublesome. The length of time that a person is capable of existing under such circumstances is various. Children die in a few days; but adults have fasted for weeks, months, and even it is said for years.

After death every part of the body is found in a state of extreme emaciation; the blood-vessels shrunk; the blood thin and watery; and the stomach, and every part of the intestinal canal, very much contracted. Their cavity is either quite empty or it contains a yellow mucus, or blood of a purple colour. The size of the salivary glands is lessened; but the liver, spleen, and pancreas are generally in their natural state, and the gall-bladder is always full of thick bile.

The primary IDIOPATHETIC effect of want of aliment is a lessening of the whole organic mass; which is inanition. It slowly produces, in every respect, the opposite of plethora. Yet the blood continues to be supplied from the substance of the body to the very last; for in those who have died of hunger, the lymphatic glands are always found in a sound state. It is chiefly the fatty matter which is consumed; the naked fibres remaining. However, in a dog that died of hunger, M. Dumas ob-

served that the structure of the stomach had begun to be eroded; although this is a rare occurrence. In our author's opinion, fibre has a more near relation to life than other parts, and consequently is more able to resist external chemical action and internal morbid changes; whereas parenchymatous matter is constantly undergoing absorption and replacement. Morbid exudations, he has no doubt, are intimately connected with this last; and he hopes that they may be removed in a great measure by salutary fasting.

Whatever powerfully excites the vessels, as severe labour, large doses of mercury, spirituous liquors, and spicy condiments, favours absorption, and consequently accelerates emaciation. Hence, individuals who have lain for several days in a state of somnolency appear to be little changed; and thus we account for certain animals being able to remain so long in a torpid state without food. In a state of excitement, therefore, and when the body is enlarging, as in children, much more food is required than in ordinary cases; agreeable to an aphorism of Hippocrates. That very weakness consequently, which is the effect of abstinence, by rendering the process of absorption less active, protracts existence; and hence the long fasts on record are by no means so miraculous, as they would otherwise appear. Our author, in opposition to Haller, will not allow that there is any acrimony of the humours in these cases.

The LOCAL affections of the alimentary canal, which are the consequence of fasting, are of two sorts.

The first affection, or the clearing of the system from a load of food, in ordinary cases is not considerable; for when nothing more is taken than what is absolutely necessary, little advantage, can be obtained from fasting. But fasting is of some importance in diseases, where even a very small quantity of food produces a great degree of oppression; and in gluttons, who by this means are brought nearer to the natural state. The second affection, or that peculiar feeling by which the system becomes sensible that something beneficial is witheld from the alimentary canal, is called hunger. It is periodical, but, owing to certain circumstances, it returns sooner or later in different individuals; and, when the body is in a healthy state, its approach is accelerated by acids, aromatics, unusual though moderate toil, cold, and the sudden loss of bodily fluids. But in ordinary cases its periods of return are very exact. As these periods vary in different individuals, so do the quantity and quality of food. Thus, one man will eat at a meal what will serve another for a week; one man relishes what is bitter, another what is sweet; this one is fond of acids, and that of salt.

When food cannot be procured, hunger may be allayed in various ways, or it may be stopped entirely by opium, tobacco, lead, arsenic, and putrid effluvia. But various circumstances, connected with the animal economy itself, lessen or increase the desire of food; and such irregularity appears to be occasioned very generally by an idiopathic or symptomatic affection of the alimentary canal. Hunger, our author remarks, is that peculiar state of the organs appropriated to digestion, in which they are able and willing to digest, but are in want of the materials necessary for digestion. The whole alimentary canal, in his opinion, is the source from which hunger springs; and he thinks that although a part of the canal may be unfit for digestion, by having had its nerves destroyed or cut, it may still retain some degree of appetite. The stomach however, has evidently the greatest share in its production, as, when it is filled, hunger generally ceases. In a state of abstinence the inner coat of the stomach and bowels absorbs with increased activity, although the secretion of the gastric and other juices does not cease for some time; yet it is imperceptibly lessened. At length the inner coat becomes completely dry. The peristaltic motion continues for some time longer; but at length the muscular coat is reduced to a state of permanent constriction: and its irritability from the very first is so increased, that not even the purest water can be retained in the stomach. Hence, it is well known that, those who have been long the prey of hunger can bear very little on the stomach at once.

We think it needless to enter with the author on the consideration of the proximate cause of hunger, as, where opinions have been so contradictory, we are satisfied we should arrive at no certain conclusion. The author thinks that the painful feelings of hunger are planted in us for a wise purpose, as were it not for them, the sluggard, indulging in his laziness, would sink with apathy into the arms of death. After observing, in the next place, that the ancients, with a great show of reason, looked upon the abdomen as the seat of the affections and passions, he draws a dreadful picture of the effects produced on the system by pure hunger, or famine, and alleges that in those persons where it has been borne mildly and for an unusual time, there must have been certain circumstances present which obviated its effects.

As even poisons, in skilful hands, have become very powerful remedies, in the same manner abstinence from food, or fasting, though in the end it will destroy life, has proved, in particular circumstances, extremely salutary. "Somnambulæ interdum" he says "omnino danda sibi alimenta etsi postulantibus negant:

tempusque constituant plurium sæpe hebdomadum: nec raro prosper eventus dicta eorum probavit."

But it is no easy matter to make patients submit to rigorous fasting; and we are informed by Celsus, that in his day they would allow the physician to interfere with any thing, rather than the regulation of their diet. In attempting, however, the cure of disease by fasting, it is necessary to attend to the patient's strength; and we should keep in view the observation of Celsus. "inediam facillima sustinent mediæ ætates, minus juvenes, minime pueri, et senectate confecti."

We should also remember that during abstinence repose is requisite, and that the changes from a rich to a poor diet should be made in a very gradual manner.

The states of the animal economy, in which it is probable that fasting may be advantageously employed, are, 1st. When the patient is troubled with indigestion, food taken into the stomach so far from being serviceable is but a useless load;—in such cases, when the bowels are loaded with crude matters, it is absurd to give volatile stimulants internally. Here hunger will be the best restorative. 2nd. Hunger itself is but a symptom, depending on an empty state of the bowels; yet by its means, the course of diseases may be, in some respects, moderated. Thus, when the system, as is known by the violent bounding of the pulse, is in a state of extreme morbid irritation and hastening onwards to a crisis, we generally endeavour to cut the disease short by blood-letting. But such a remedy would be of little use, were it to be immediately followed by the digestion of a hearty meal; whereas abstinence would not only assist blood-letting, but would in a great measure supply its place. 3rd. Abstinence from food may also be of use in contributing towards a radical cure, when, independently of the whole frame being in a state of disease, there is a perverted assimilation of the aliment. In this case an ascescent or saline diet is the best remedy; and if we wish to produce a favourable change in the constitution, more powerfully and in a shorter time, we must make the patient abstain altogether from food, till the desired object is obtained.

The author now proceeds to enumerate the individual diseases, in which it is likely that fasting may be of service. We are taught its utility, he observes, by the want of appetite which almost universally ensues when a disease is present. It were much better, however, if, by early abstinence from food, we could altogether prevent the disease from making its appearance. Fasting was the remedy had recourse to in most diseases by Hippocrates and his translator Celsus; generally for a day or

two, before they gave even a laxative medicine, and this practice they enforced more particularly in fevers. The ancients, indeed, attended to this point with an anxiety which may appear ridiculous to some moderns; although several physicians, in the present day, as is mentioned by M. Forstmann, have followed their example with advantage. But in modern times, says our author, the relatives of the patient are too often more alarmed at his want of appetite than by the danger of the disease, and are continually trying to excite a false appetite by nice dishes, and are frequently the cause of his death by their ill-timed benevolence.

Almost all physicians agree in prescribing blood-letting, and the antiphlogistic regimen in inflammatory fever; but here, even barley water and oatmeal gruel seem sometimes to be injurious, for the patient very soon loaths them and calls for pure water. In local inflammation, also, as long as blood-letting is indicated, fasting seems to be of essential service; and of this M. Forstmann gives several instances. The ancients employed fasting in headache, catarrh, pleuritis, gastritis, and hepatitis; and as Galen informs us, Evasistratus rejecting blood-letting entirely, cured every kind of inflammation by fasting.

In chronic diseases, fasting can be made use of only to a certain extent. Of such diseases he considers, in the first place, those which are vulgarly called nervous. Houttuyn, in the Memoirs of the Academy of Sciences, gives an instance of hypochondriasis and melancholy cured by a fast of forty-seven days; but he states that the disease returned when the patient again indulged in a rich diet. Indeed there are many similar cases on record. Muller, in Hufeland's journal, has given the cases of two maniacs completely recovered by fasting and low diet; one of whom, however, had a relapse, when he returned to his accustomed gluttony.

To this purpose, the author gives the two following cases which were under the care of Professor Nasse, at Bon.

W. K. now in her 22d year, in consequence of a bad education, and the dissoluteness of her life after the time of puberty, was seized with genuine furor uterinus. She was received into the clinical ward, and was put upon the antiphlogistic regimen, and had digitalis purpurea administered to her, by which her complaint was much restrained; but as it still had a tendency to return in paroxysms, and as she had experienced benefit from an abstinence of a few days, she was made to fast for three weeks, and in this way was restored to perfect health.

C. B. a native of Bon, eleven years of age in February, 1820, had an attack of chorea, which shook nearly all the muscles of

her body, so that she could neither walk nor stand, nor carry any thing to her mouth, but by tossing up and down on a sofa or a couch and tearing her clothes. Her senses were entire, if we except a slight degree of fatuity. She sometimes complained of pain in her bowels; she had a ravenous appetite; and her stools were scanty and clay-coloured. Purgative and anthelminthic medicines were administered, which had little effect on her bowels, and none whatever upon the disease. She then took metallic tonics, and nervous stimulants, but to so little purpose, that on the 24th of May, she was no better but rather worse. On that day her physician put her upon a very low diet and gave up the use of medicines. The only food allowed her was a little weak soup three times a day. As the convulsive motions were very much lessened by the third day, the same plan of cure, although the girl was clamorous for more food, was continued till the 15th of June, at which time she had completely recovered the use of all her members; and now August 9th, 1820, she continues in good health.

Celsus has recommended fasting as a cure for epilepsy. But no where is caution in the use of abstinence so requisite, on the part of the physician, as in diseases of the nervous system; and the experience of the French and English physicians has condemned its promiscuous employment in maniacal affections.

The author now proceeds to consider the utility of fasting in those diseases which depend on perverted assimilation or aberration of the plastic or formative principle, and which are commonly denominated affections of the generative system. As many of them are the consequences of luxury, it is reasonable to hope that in their commencement at least, they may be cured by abstinence; but when the disease has been of long standing, and the body is much emaciated, such a practice would be manifestly improper. However, we ought always to bear in remembrance, that in weakly constitutions, a very rich diet is apt to give strength to the original malady, and enable it to break out afterwards with additional violence. In the cure of syphilis, the older physicians always assisted the action of mercury by abstinence, for if much food is taken during the employment of such powerful medicines, which naturally disorder appetite and digestion, their effect will infallibly be lessened by the indigested matter, thus necessarily accumulated in the bowels. Accordingly, when Louvrier and Rush again brought into notice the cure of syphilis by inunction, they, at the same time, put the ancient dietetic rules into full force. In the cure of organic diseases by mercury, the same dietetic rules should be observed; and in these cases, certainly, not the least part of the cure must

be attributed to abstinence. Whether fasting will be able to cure organic diseases, without the use of mercury or any other medicine, experience only can determine. The following case, however, will show that it can do a great deal. P. R. aged 22, was received into the hospital in the end of last year, with a tympany (tympanitis) of five years standing, the cause of which could not be detected after the most careful examination. Borborygmi were present, and at intervals an inflammatory diathesis. After various means of cure had been employed for four months to no purpose, it was thought that the case was an organic affection of the abdomen, and it was determined to attempt its cure by mercurial frictions. Preparatory to this, the patient was made to fast for nine days, at the end of which time, when he was suffering severely from the pangs of hunger, he unexpectedly vomited a number of black kernels which had been swallowed seven years before, while he was eating cherries. Upon this the swelling of the abdomen immediately subsided, and he was restored to perfect health.

In the cure of dropsy, Celsus recommends rest, and abstinence from meat and drink; and nearly the same plan of cure was adopted in diabetes by Dr. Watt, of Glasgow. The palliative virtues of fasting in incurable diseases of the heart, the great blood-vessels, and the lungs may be also here mentioned. J. R. of Bon, aged seventeen, and affected apparently with aneurism of the right ventricle of the heart, applied for assistance, in consequence of oppression, palpitations, anxiety, spitting of blood, dizziness, headache, &c. After trying in vain to restore a healthy action to the diseased parts by venesection and mild saline purgatives, recourse was had to fasting, with such decided benefit, that the patient gained strength, and the disease could be known only by the peculiar pulsation of the heart. H. J. who was very much distressed with incipient phthisis, having been put upon a preparatory abstinence, with the view of undergoing a course of mercury by inunction, for the cure of partial induration of some abdominal viscus, found himself greatly better, and his sweats, fever, and cough were much diminished. Kreysig, in his work on diseases of the heart, recommends a very low diet in such complaints, as the smallest excess oppresses the diseased organs. But, when persons who are affected with such diseases, are accustomed to a very spare diet, they live more cheerfully, and die more slowly and more easily; and every physician should strive to make his patients' death as little painful as possible, when he cannot cure him.

We have been induced to give a full analysis of M. Forstmann's brochure, not because it contains much that is absolutely

new or extraordinary, but because it gives a fuller view of the subject, than is to be met with, as far as we know, in any other publication. His style is in general correct, but at times it is interlarded with latinized Greek, and words *infimæ Latinitatis*, and is also not unfrequently obscure; yet upon the whole it is a work of promise.

LUDOVIC FRANK ON PLAGUE, DYSENTERY, AND OPHTHALMIA *.

[We are indebted for this Analysis to an intelligent and able physician, who accompanied the Egyptian expedition.—EDITOR.]

The author of this work is a nephew of the great Frank, and physician to Maria Louisa, late Empress of the French. He professes to give in it the result of his own experience in the plague, particularly as to curative means. He thinks it needless indeed, to repeat what innumerable authors have said about its causes or symptoms, or to notice their idle speculations or absurd practice. From the moment that he landed at Alexandria, in November 1797, till his departure from Egypt, four years afterwards, he employed himself in collecting and comparing observations on the plague in various parts of that country, particularly at Alexandria, Rosetta, and Cairo; and he mentions that he had previously read most authors on the subject. He had seen the observations of Degenettes, Larrey, Assalini, &c. after his return to France; but he did not wish to publish his own till he had visited other countries of the east; and for this purpose he spent a year at Tunis, and six years on the continent of Greece, comparing the observations he made there with those which he had formerly made in Egypt. But his present treatise is dedicated entirely to the Egyptian plague. European authors, he says, and very justly, have very often confounded epidemics with the plague, which were only contagious typhus.

Plague.

Dr. Frank describes plague to be a febrile disease more or less contagious, which is attended at one and the same time by very great weakness of the vital powers, and by the eruption of buboes or carbuncles, and which carries off the patient much

* De Peste, Dysenteria, et Ophthalmia Ægyptiaca, auctore Ludovico Frank, M. D. &c. &c. &c. pp. 223, 8vo. Viennæ.

more rapidly than is ever done by any other febrile disease. It is a fact, however, that the plague excites much less terror in Egypt than the small pox; for many escape the former, but hardly one in ten thousand escape the latter. The plague appears at times without any debility of the vital powers; of which he gives some instances, particularly one of a person who danced and was merry at the very time he had a bubo forming in the right axilla. He has also seen many cases where buboes either never appeared, or not till the very moment of death. It is indeed so very uncertain a disease, that a patient who is in the highest spirits may be dead in a very few hours; whilst he, whose life is despaired of, often rapidly recovers. From comparing his own observations with those of other physicians, Dr. Frank is convinced that almost all the plagues which occur in Egypt are attended with debility of the vital powers; and he thinks physicians ought to be on their guard against what may appear to be saburræ in the first passages, or plethora or inflammatory diathesis, particularly as some have described an inflammatory, putrid, and nervous plague, all existing nearly at the same time. But such, he says, are only novices in the art of medicine.

The author has divided his essay on plague into twelve parts or queries, which we purpose to examine in succession. 1. Has the plague its ORIGIN in Egypt? Almost all the learned travellers who have visited that country, affirm that it is brought into Egypt from abroad; as from Constantinople, Smyrna, Barbary, or the islands of the Archipelago; but many of the French physicians have declared that it is endemic to Egypt. This last opinion is opposed by Dr. Frank. From the extreme populousness of that country in ancient times, and indeed till so late an æra as the invasion of the Saracens, he argues that it must have been then unknown; and particularly as it is not taken notice of by any of the ancient historians. The plague of Athens, indeed, as described by Thucydides, is thought to have been brought from Egypt, as it began in the Pyræus near the foreign shipping; but in Athens, at that time, there were an abundance of causes sufficiently energetic to produce a contagious fever of the most malignant type, without the aid of an imported contagion. But this plague was only a very contagious typhus.

It is since Egypt came under the iron sceptre of the Turks that plague has been frequent in that country, as well as in Barbary, Constantinople, and Smyrna, &c.; and it would seem that indolence and misery, the source of so many diseases, are the causes which are constantly renewing the contagion. At present, however, it is much more common than it was in the time of Prosper Alpinus, two hundred and thirty years ago; and his

opinion is that the plague is always imported into Egypt; which Dr. Frank confirms by his own experience. But when a petechial or nervous fever has been for some time prevalent, he thinks that it may degenerate into plague; for in every part of the Ottoman Empire, the causes producing it prevail equally, and, except in a few instances, there are no skilful physicians or magistrates to suppress it on its first invasion. Our author even thinks that a malignant fever, left to itself, would, in any part of Europe, degenerate into plague. Concerning the salubrity of Egypt there have been very different opinions; but Dr. Frank asserts that it is naturally one of the most healthy countries in the world; though it is only so when people live temperately. It is no easy matter to explain why typhoid fevers degenerate more readily into plague in the east than elsewhere; but the author thinks it may probably depend on the population being crowded into narrow huts, and on no public precautions being taken to arrest contagion.

2. What are the various appearances which precede the plague, or announce its COMMENCEMENT? Most people now-a-days, physicians as well as others, assert that there are none. Prosper Alpinus affirmed that its appearance was connected with the overflowing of the Nile, but Dr. Frank could not learn that there was any foundation for this opinion. A mortality of some part of the brute creation has been thought to precede it, and, though even this is uncertain, it is a circumstance attended with some danger. Small pox, of the malignant kind, has been thought also to be its forerunner. Famine is a more certain precursor. The plague, it is thought, will soon break out in a country, or is already present, when individuals who have formerly had the disease, feel pain in the scars left by buboes or carbuncles. This is a remark of MM. Valli and Paris, who have given excellent descriptions of the Levant plague. But during the plague, Dr. Frank has known pain in the armpits and groins, in himself and others who never had the disease; nor could it be ascribed to the power of imagination. But with all this it may be affirmed, that there is no circumstance which undeviatingly indicates its approach.

3. What is the COURSE of the plague in Egypt? It is not wont to originate in any one particular place. Whilst the French occupied Egypt, the plague began mildly in September, and so continued till January; it was more severe till April, and in May and the beginning of June, it had very nearly disappeared. After the summer solstice it was followed by severe typhus, easy of cure, and in which the author observed neither buboes nor carbuncles. Cases of plague, when it pre-

vails in any city, occur more frequently at the time of the new moon, and they are then also more fatal. Diemerbroeck also observed this in Holland. There are fewer cases when the wind blows from the north or north-west, and they increase in number when it blows from south or ss.w. the former exciting vigour, the other languor and lassitude. The bad effects produced by the south wind are ascribed by Larrey and Savaresi to its containing a poisonous quality; which, however, is mere conjecture.

4. Does the plague always END at a fixed time? Proper Alpinus says, the plague always ends about the 22nd of June, and Dr. Frank found this to be the case at Cairo, but not exactly at Rosetta, Alexandria, and Damietta, where it sometimes continues till the middle of July. The plague was brought in a chest of clothes from Alexandria to Rosetta, and infected a whole family in August; but this is uncommon in Egypt, and was probably owing to the confusion and fear produced by the landing of the French army; for at that time the natives concealed all their valuable articles, their best clothes, and even their dead, instead of exposing every thing as usual, at the ceasing of the plague, to a stream of fresh air. The south and ss.w. winds often blow for days together in March, April and May; and during their continuance, the rich remain shut up in their saloons at home. In the beginning of June the North wind blows steadily; and at this time and till September, all but the dissipated enjoy good health. It is, therefore, to these winds, which temper the excessive heat of the weather, and to the heat itself, that we may principally attribute the termination of the plague. Dr. Frank gets angry at Pugnet, a French writer, for asserting without proof, that the plague in Egypt only sleeps for a time, and is never extinguished; although that country has been free from it at one time for eighteen years. It broke out, indeed, amongst the French, yet the number of sick in their army in Egypt was far less in proportion than in the French armies in Europe; and yet this is the country which Savaresi calls detestable. Our author thinks, that Egypt, under an active government, might be made the loveliest, the most healthful, and the happiest country in the world.

5, 6. In what DISTRICTS of Egypt does the plague generally make most havoc? And what is commonly the extent of its devastation among the inhabitants? That part of the country adjacent to the Mediterranean, and the cities there, are more subject to the disease than other parts; but Dr. Frank cannot allow that this entirely depends on the unhealthiness of the situation. It depends on the frequent commerce carried on with

various parts of the Levant, by which contagion must be very easily imported into a country where no preventive means are ever used. Even when the French were masters of the country this could not be entirely avoided. Certain parts are freer from it than others; and the cause of this seems to be altogether independent of winds or moisture; for it has been known to rage in Bulak, a suburb of Cairo, whilst the city was altogether free from it. To explain all this, it is necessary that we should allow a contagious principle or miasma. The number of the inhabitants of Egypt having been said by the older travellers, to be much greater than it really is, and the deaths by the plague have in like manner been much exaggerated; for instance, Cairo has been said to contain three millions of souls, when in reality it contains only 300,000; but it is probable, that when plague has raged for four months, 7000 may be cut off in Cairo. When the plague, however, has been mild, hardly a fifth part of that number fall victims to it.

7. What are the CAUSES capable of producing the contagious principle of the plague? Dr. Frank runs over the opinions of authors concerning the contagious principle, and considers particularly what they have said about the effluvia of stagnant and putrid water; but he thinks that none of them give any thing like an explanation of the matter. Even when the water became stagnant in the great canal that passes through Cairo, he feared that the inhabitants nigh it were affected, not with plague, but acute and sometimes pestilential fevers, which rarely occurred in other parts of the city. Nor did the plague seem to attack those who lived near the canal, sooner or more severely than others who lived at a distance from it. And even when the water was emptied from it every year, whilst the French possessed Egypt, the plague nevertheless occurred as formerly: others have supposed, that it proceeds from the numerous burying grounds in the neighbourhood of the Egyptian cities, especially Cairo. If such causes could produce plague, it would occur every year, but such is notoriously not the case. In short, Dr. Frank is of opinion, with many distinguished physicians, that in man alone we must seek for the origin of plague; for he thinks that the hospital and gaol fevers which rise from the concentrated effluvia of human bodies, are nothing else but the plague in a diminutive form. When the plague has raged at any time in Europe, without being traced to a foreign source, it is probable that it has been preceded by malignant fevers; and our author imagines that it is the high state of civilization alone, and the plenty that pretty generally prevails in Europe, which prevent such fevers from degenerating at this day into plague.

But in Egypt, no precautions being used, and every calamity ascribed to the will of God, and what are called predisposing causes of the disease being often present, it is no way surprising that malignant fevers, or plague, should be generated. Locusts, by destroying every vegetable production, and then dying and putrifying, have frequently produced, or helped to produce, not only pestilential fevers, but the plague itself; of which Dr. Frank has given various instances. Some writers, among whom is Athanasius Kircher, have ascribed the pestilential principle to invisible animalculæ. "Certum est" says our author, "in spermate animalcula adesse. Hinc non plane rejicienda opinio Kircheri, pro qua adhuc alia argumenta adduci possint; et hanc ol causam non est negligendum usus externus mercurii et sulphuris in hoc morbo, ut venena insectorum humanorum considerari possunt." We confess that we are more sceptical on this subject than Dr. Frank.

8. What INDIVIDUALS does the plague most readily attack? Strangers are far more liable to it than natives, and those who live dissolute lives than the temperate and sober; but in general it is said to spare neither age nor sex nor constitution. In repeated instances, Dr. Frank saw it attack individuals who had undergone unusual fatigue; hence he concludes that debility of frame, however induced, is the most predisposing cause and not any peculiar idiosyncrasy, as some authors have fancied. He found that young physicians, surgeons, and apothecaries were always the most readily affected; whereas he knew a Turkish Surgeon at Cairo and another at Rosetta, who let blood to the infected French for a long time with impunity; and he has known the buriers of the dead wear the clothes of people who had died of the plague, without being infected. So that habit is a powerful prophylactic.

9. How does the contagious principle ACT upon the human body? On this subject we can form only a few probable conjectures. Dissections in case of plague have, hitherto, our author thinks, been conducted with too little accuracy; for, instead of merely examining the head, the chest, and the abdomen, we should scrutinize the nervous system in its larger branches, and particularly the spinal marrow. In some patients who had died of contagious typhus, the celebrated Soemmerring found that some of the larger nerves were of a much browner colour than natural; and in the body of a man who had died of typhus, and where there had been much nervous irritation, Professor Reil found, by experiment, that the blood had penetrated every part of the nervous matter. From other testimony of great weight, Dr. Frank believes that the gangrenous inflam-

mation which sometimes attacks the nerves in typhus has not been as yet sufficiently examined.

The contagious principle does not always possess the same degree of activity, but its primary action appears to be on the vital powers, and it has a more fatal influence on the principle of irritability, than is shewn, either by poison or the gases. In some constitutions, the quantity of contagious principle seems to be increased with prodigious rapidity; and it is this rapid increase which the physician ought to combat, instead of trying, like the older authors, to expel it from the body by vomiting, purging, urine, or sweat. It is this they should attack and not particular symptoms.

10. What are the DIAGNOSTIC SYMPTOMS of the plague? Even very eminent physicians have mistaken the plague at its first appearance. At that time, it very much resembles the acute nervous fever, the contagious fever of hospitals, jails, &c.; and no buboes or carbuncles have as yet made their appearance; but the doubts of physicians vanish, when they hear that there is a general alarm of plague among the natives and that patients have died of an attack of fever in 24 or 48 hours. But buboes very soon appear in the arm-pits and groins, and more rarely in the parotid glands. When a bubo is once formed, it is commonly more oblong than broad and lies three inches lower down than the groin. Buboes sometimes never appear, yet when the glands are examined, they will generally be found more or less affected; but at any rate they are very irregular in their appearance. When they do appear in any case, the physician should be very minute in his enquiry into the patient's history; for patients are apt to assign any cause for its appearance but the real one. On the other hand our author has often seen very innocent buboes give great alarm.

The danger from contact being so great, Dr. Frank was hindered from examining the pulse; but he thought that a careful inspection of the patient's face assisted him very much in his diagnosis. There is a look of sorrow; the eyes are melancholy; the tunica conjunctiva turgid; the cheeks of a dark red; and the circumference of the lips, pale. These symptoms, however, are not always present. When the plague is prevalent, and patients are met with who stutter as if they were drunk, it is probable that they are infected. A certain degree of sleepiness is also a suspicious circumstance. The tongue often greatly assists the diagnosis. Thus Dr. Frank has sometimes seen it covered over with a white mucus, as if the patient had kept milk for some time in his mouth; and at other times a dry brown line appears in its centre, whilst its edges are red and moist.

M. Paris considers this last as a pathognomonic sign of the plague. Severe headache, nausea, and vomiting, also attend; but the surest diagnostic is great prostration of strength. A carbuncle is a pretty sure sign of the plague, and in order to detect it, the physician should make the patient strip before him. Carbuncles have been found behind the ear, when there appeared at first sight only a trifling erysipelas on the cheek. In his examination the physician cannot display too much patience and calmness.

11. What is the PROGNOSIS in plague? It is almost generally fatal, and when any one recovers, it is apparently more by chance than by the aid of medicine. It is less fatal at the commencement and at the end of the epidemic. The symptoms which promise the return of health are often fallacious. The most regular progress of buboes gives no certain hope of recovery; but their too rapid course is always a mortal symptom. When they are of a fine red colour there is hope; but none whatever when their colour is dark red or livid. Diarrhœa is commonly a fatal symptom. Nothing seemed so favourable as a general sweat, and nothing so dangerous as its sudden stoppage.

12. How is plague CURED? In the writings of physicians, we find many remedies and formulæ of medicines, which might lead us to believe that the cure of plague is a matter of no difficulty; but on trial they only serve to show us the powerlessness of our art. However, we may, perhaps, yet hope to know a specific against the plague, as well as for other diseases. Of the French, who were attacked by the disease in Egypt, about one fifth part recovered; but probably, if circumstances had been more favourable, the proportion might have been larger. The French physicians, indeed, were taken altogether unprepared; and probably their patients would have had a much better chance of recovery, by drinking largely, like the natives, of liquorice decoction, than in having the best French remedies administered to them. But had the French remained for a longer time masters of Egypt, it is likely that the medical treatment of the plague would have been much improved.

It is the author's opinion, that the attention of physicians in this disease, should be directed, first of all, to the very great agitation of the nervous system, and to the extreme debility, which are very often present. Arterial re-action should be little attended to, as it is altogether momentary. The remedies given to obviate these symptoms, he thinks, have either been improper or improperly administered. Those, which in a large dose would be hurtful, should be given every quarter of an hour, in a small one

both day and night, till the desired effect be produced; alternating them occasionally with other medicines. The great good he has experienced in Europe from remedies similarly employed, in very dangerous disorders, induces him to believe, that if circumstances had permitted, they would have had an equally good effect in the plague of Egypt. Emetics were always hurtful, by increasing debility, and occasioning a loss of time. From his own experience and that of others, he condemns purgatives, though most writers on plague have declared war against the abdomen. Blood-letting was found equally hurtful. Sotira, it is true, affirms that he cured patients by this remedy; but because the patient did not happen to die, are we to conclude that it cured the disease?

In beginning to enumerate the REMEDIES employed by himself; Dr. Frank observes that a physician cannot conduct experiments with success, unless he has a separate set of attendants and an inspector for the day, and another for the night. On being appointed to the Pest Hospital, at Rosetta, when the French were preparing to leave Egypt, he gave camphor in the dose of two, or even of four drachms in the 24 hours, and also ordered it to be thrown into the rectum by means of small glysters. He applied also, repeated blisters to the arms and thighs. From neither of these remedies was any benefit experienced. Indeed the blisters might as well have been applied to a piece of wood. He also gave the antiemetic potion of Riverius. But the sick, in their delirium, often refused every remedy. He visited his patients three times a day; and the only precaution he employed was not to touch any of them, and to carry a staff in one hand, and a fly-flap in the other, to drive away the millions of flies, which seemed to derive their nourishment from the sick. He used friction with olive oil, with the most decided success, a profuse perspiration generally breaking out after is use, and continuing till a crisis followed; and in two days time the delirium and great prostration of strength were generally removed. When the sweats are long in breaking out, there is always less chance of recovery; but when they do break out, the patients should be carefully confined to bed, and on no account be exposed to a stream of fresh air. One friction in the day is sufficient, and five or six generally complete the cure. Six ounces of oil will be requisite for each friction. Frictions may be assisted by internal remedies, when such are indicated. To Mr. Baldwin, the English consul in Egypt, and to Father Lewis of Smyrna, the honour is undoubtedly due of having, in the present times, introduced oil-frictions in the plague, a remedy, says the author, "quod etiam in febre flava,

et in aliis febribus characteris maligni, que sæpe causa sunt summæ mortulitatis tentori posset."

When the oil, in the French stores was exhausted, Dr. Frank had recourse to opium. He gave it in repeated small doses, or half-grain pills, from four to sixteen grains in twenty-four hours; and though there was no regular crisis, he heard, with no small surprise, his now convalescent patients asking him for more of the pills, which had done them so much good. But his experiments were continued only for forty days, as he was obliged to return to Cairo. Yet he is persuaded if any good is to be derived from opium, that its dose should be gradually, but rapidly increased at equal intervals. At Rosetta, one half, and at Alexandria, two thirds of his patients recovered. Convalescents from plague, in general, need nothing but nourishing diet and surgical treatment; but they ought to shun every excess.

Baron de Humboldt having found that muscular parts, which had been completely exhausted of their irritability by galvanism, recovered a certain portion of it, when moistened with an alkaline solution; and Dr. Stutz having found such a solution of great use in tetanus and other spasmodic complaints, our author wishes much that physicians would discard all the old remedies, and try the alternate use of opium and some alkaline salt in plague. He seems also to think Dover's powder well worth trying. He seems likewise to think very favourably of mercury; and he proposes that, in stout subjects, calomel may be increased to the dose of two drachms in 24 hours, adding opium to each dose, if it should seem to act too much on the bowels. Belladonna was used with success in the plague of Transylvania, by Dr. Lang. Two grains of the powdered leaves mixed with sugar were given daily, and it was also sometimes used in conjunction with cinchona. The rapidity of its action, in Dr. Frank's opinion, should make it a valuable remedy in plague; for thus it very speedily brought on sweats that were critical. M. Valli has a high opinion of asafœtida given to the extent of several ounces in 24 hours, or used in glysters, or rubbed on the skin. In some cases it might also be worth while to try the sulphuric, nitrous, and muriatic æthers; used in small and frequently repeated doses, so as not to produce too sudden an excitement. In mild cases of plague our author has given them in the dose of 25 drops, several times in an hour; and double that quantity in some cases. They must be used in the very outset of plague, notwithstanding minor contra-indicating symptoms; for the disease must be attacked vigorously at once, and cannot be cured by emulsions and palliatives. He does not seem to be partial to the oxygenated muriatic acid; and yet it

has been found useful in various putrid disorders. Dr. Grohmann, however, speaks highly of it; and although he allows plague to be a nervous fever, yet he thinks that at its commencement when there is plethora, venæsection may be employed with safety and advantage. But of this physician, our author has a very indifferent opinion. He thinks that phosphoric acid diluted with mucilage and water, and given in combination with sulphuric æther, might be a valuable remedy. And so he thinks might the arseniate of potash. It appears, too, that sulphur combined with camphor has been found useful. Tincture of cantharides has been also of service.

The cold affusion has been extremely useful in the hands of various respectable physicians in Europe; and its good effects seemed principally to depend in its lessening delirium. In Egypt, where the water is never very cold, it should be used three or four times a day. Sponging the body, the author found of very great use in a typhus at Corfu. The cold water affusion, though ascribed to Wright and Currie, is not a new remedy. In 1736, Dr. Sanchez, in a malignant fever, covered his patients with snow; and he says, that out of forty patients treated in this manner, he lost only four. Dr. Frank is anxious that the physicians who may hereafter visit Egypt, would commence a series of experiments to ascertain the utility of various substances rubbed on the skin; as internal remedies, sometimes, cannot be administered. In this trial it must always be remembered that there is no time to lose. If cold applications to the head are useful in typhus, why may they not be so in plague? and when in the latter disease there is much debility, and the patient seems to be apoplectic, as in typhus, may not vinous and aromatic fomentations to the head be of great service? To excite sweat, hot bricks, which have previously had vinegar evaporated from them, may be wrapt up in linen and applied to the feet, legs, and arm-pits. For the same purpose, the Turks and Cossacks cover the body with a thin paste, made of clay and water; and when the patient is put to bed in this state, it is said that a profuse sweat very speedily breaks out. This remedy could only be used in hospitals. The author next says, that he is the first person to propose the sulphureous fumigations of M. Galés, as likely to cure the plague; and he urges physicians to have the apparatus erected at Constantinople, &c. But he wishes the experiments to be made by a sagacious physician, and not by young men: it will be necessary that the physician should shut himself up in the hospital with his patients.

Dr. Frank proposes that the Emperors of Russia and Austria should found a seminary for the education of physicians, destined

to cure plague, by acquiring an intimate knowledge of it in the countries where it is most prevalent. The candidates for admission into the seminary must be all young physicians of talent, who have previously practised medicine for five years. They must be able to speak the Turkish and Arabian languages; and they should solemnly promise to stay two years at Constantinople, two at Smyrna, and two in Egypt; and they must afterwards produce certificates from the European consuls at the above places, that they (the physicians) have devoted themselves arduously to the cure of plague. On their return to Europe, they should be employed honourably in the civil or military hospitals, and be ready if the plague should appear any where, to set off to the scene of it at a minute's notice. The management of the seminary should be intrusted to an elderly physician who has resided in the east. They should all have salaries for life; and to those who are abroad the necessary medicines should be supplied by the consuls. Each government should send out ten physicians every five years. Plague hospitals should be erected in various parts of the Levant, in which these physicians should practise. "Mittuntur," says our author, "eruditi naturæ scrutatores in omnes orbis partes, ut inde plantas, animalia, et mineras adferant An non æque magni momenti res esset, si in medio nostri viros haberemus, qui jam pestem tractare consueverant."

Egyptian Ophthalmia.

Dr. Frank found from exact inquiries that this disease affected the natives in any part of the year; but it seized the French soldiers only when the south wind blew, or when they had made fatiguing marches in very hot weather, or been on guard in the night time, in the open air in damp situations. With regard to the nature of this opthalmia Dr. Frank differs from some preceding authors. He thinks it is never a disease of the system; or, in other words, that it is never attended with symptoms of inflammatory fever, symptoms which, from the equilibrium of the climate, are rarely seen in Egypt: and besides, all the causes which produce ophthalmia are of a debilitating nature, as it is by no means the stoutest people who are most liable to it, but the contrary. Indeed all his observations and researches have convinced him that the ophthalmia of Egypt is always a passive or local inflammation; and it is proved, he thinks, that general or topical remedies, which produce much debility, are hurtful in this ophthalmia, and that their inconsiderate use is one of the chief causes of that loss of sight which so frequently follows it. This agrees, in some measure, with the experience of Mr. Travers. At times general debility precedes ophthalmia; at other times it is followed by universal languor; but occa-

sionally they are both wanting. Egyptian ophthalmia may, therefore, be divided into three species: 1. Simple local ophthalmia; 2. Ophthalmia with debility; 3. Local ophthalmia, followed by debility. But, in the author's opinion, it is not necessary to describe these three species separately: he thinks the best way will be to consider ophthalmia according to its degree of intensity.

We may say, therefore, that there are five degrees of Egyptian ophthalmia. In the first, one or both eyes become suddenly, though slightly red, and the conjunctiva, at a distance, appears to be of a rosy redness. Commonly at that time there is neither pain nor watering of the eye, and the patient has no intolerance of light; the redness sometimes disappearing in a few days without any remedy being used. This degree of ophthalmia is attended with no danger.

In the second degree the disease appears very suddenly, with sense of pain, as if a grain of sand had got under the eyelid, and with heat in the whole ball of the eye, which forces the patient to rub it frequently. The eye is very red and waters much; and in a short time the patient cannot bear light. In general it ceases in eight or ten days, if the eye is defended from light, even although no remedies should be used. Indeed, for the most part, it runs a very regular course. The patient is at the worst from the fourth to the eighth day. Its course indeed, upon the whole, is very like that of catarrh.

In the third degree of ophthalmia one or both eyes become suddenly red, with or without the discharge of tears; and in this state the patient feels no pain, and can attend to his usual employments.

All these degrees of ophthalmia, if improperly treated, may become worse; so that the disease sometimes passes very quickly into the fourth degree, which, as has been just said, is sometimes the sequel of the three first degrees; but occasionally the second passes very rapidly into the fourth, and there the disease becomes truly formidable. It comes sometimes as quick as lightning, the patient feeling the most acute pain in every part of the eye; and on the second, third, and fourth day of the disease, tears of a very corroding nature are shed abundantly, and the eyelids swell so much that the patient cannot open them. From this swelling, which is either œdematous or erysipelatous, a great deal of purulent matter is discharged, like that which is seen in catarrh. The pain is generally most severe in the night time; being sometimes very trifling during the day. Very often it will return at a particular hour, so violently, that Dr. Frank has heard a patient say, "I would willingly allow my

eye to be torn out, if I thought that, by this means, I should get rid of the pain which I now feel." Indeed, owing to its severity, he has seen very brave men cry like children for a whole night. The pain likewise spreads over and through every part of the head. The globe of the eye, meanwhile, is like a piece of raw flesh. The nostrils are, likewise, blocked up, just as when a person has a violent catarrh. At first the discharge from the eye is thin like water, but gradually assumes a puriform appearance. Its sequelæ are spots, ulcerations, and staphyloma of the cornea.

In the fifth degree of ophthalmia, the patient is more or less affected with the fourth; but its violence gradually increasing, nothing remains but a swelling of the eyelids and albuginea, together with a copious discharge of tears, which, probably, is the cause that the patients can hardly distinguish objects; and they may remain so for a long time, unless suitable remedies have been used at the commencement of the complaint. This is chronic ophthalmia. The inner surface of the eyelids sometimes remain red and swelled after the eye has returned to its natural state; but, in general, there is an intimate connexion betwixt them. Sometimes the digestive organs sympathize with the eye, and then there is a foul tongue, sickness, sometimes bilious vomiting, want of appetite, &c. But this is merely an effect of the primitive disease; for often, during its whole course, the patient has an excellent appetite. The digestion was also often affected by the patient's fear of becoming blind, and by want of exercise. But however violent the disease, fever is very rarely an attendant of it; and if it should, the author thinks it is never of the inflammatory kind. The pulse is, generally, slower than usual.

Egyptian ophthalmia has been ascribed to various causes. The first is a subtile powder flying in the air at all times of the year; most writers have thought it a very powerful cause, and many of them imagine that it injures the eyes by its quality, which is nitrous, alkaline, or calcareous, rather than by its quantity; but our author is very doubtful if this sand, in any case, be a cause of ophthalmia. He tried repeatedly to excite it, by blowing the fine sand of the desert into the eyes of young dogs, but without effect. The Bedouin Arabs, who are much exposed to these sands, are much more rarely affected with ophthalmia than the other inhabitants of Egypt; and the author and his companions have been often exposed for several days to dreadful winds, impregnated with sand, without a single instance of ophthalmia occurring. And women and children, who are oftenest the victims of this disease are very little ex-

posed to its influence. Yet this powder, though by no means a primary cause, may do much injury to eyes convalescent from ophthalmia.

A second cause is the bright light depending on the constant serenity of the sky of Egypt. By this, it is natural to suppose, that the eye is made more susceptible of the disease than it would be in other countries, and such was the universal opinion of the French medical men in Egypt. But according to our author (although he allows that a bright light may weaken the eyes) this opinion is little more than an arbitrary hypothesis. He did not find that individuals who were much exposed to a strong light suffered so much from ophthalmia, as those persons who lived almost constantly in dark habitations; nor did he find that strangers suffered more from it than natives.

The third cause assigned is cold and moisture, which, say some of the authors on this subject, produce ophthalmia in eyes debilitated by excess of light in the same way that catarrh is caused in other countries. But even this cause seems doubtful to our author; although he acknowledges that it has no show of truth. But there is no previous febrile attack as in catarrh; and those who are exposed to cold and moisture are not more subject to it than others, if so much; nor does it prevail more at Cairo in winter, which is the dampest season, than at other times of the year. Nay, one year when it attacked the patients indiscriminately in the military hospitals at Cairo, the weather was almost insufferably hot. In the second year that the French possessed Egypt, they were less subject to ophthalmia, which they attributed to their being better clothed. It is certain that when the soldiers were exposed night and day to very harassing duty, very many of them were seized with ophthalmia. The author's reasons for thinking that cold and moisture do not produce the disease are, that every year, from the 16th of June till the 10th of July, a very copious dew falls after sunset; but neither natives nor strangers are more subject to ophthalmia then, than at other times of the year; notwithstanding what others have said, the author contends that upper Egypt, which is very dry, is equally subject to ophthalmia as the Delta, where there is much co-operation from the sea and lakes, in addition to that of the Nile. Nor can the suppression of insensible perspiration be regarded as a cause. Sleeping in the open night air, or in a room with a window open, has been accused also of producing it, and it may have done so. *We, however, have slept in a tent on the sands near Alexandria, and in a ruined mosque, with an open window close to the Nile, and had no attack of it, but had it some time before from attending ophthalmic patients.*

The ophthalmia of Egypt is, in general, a local disease, which is sometimes preceded and sometimes followed by universal weakness. The causes of this weakness are frequent and numerous, and render people susceptible of the endemic diseases of the country, such as dysentery, ophthalmia, and plague. The most common are the intense heat of day, the cold and damp night air, the immoderate use of wine and spirits, too much venery, very fatiguing marches, deficiency of food, &c.; and the sudden suppression of a diarrhœa or dysentery. None of these, indeed, directly produce ophthalmia, but all favour its production, in the same manner as in time of plague they assist the action of the pestilential poison. The various circumstances attending an attack of ophthalmia will account sufficiently for the debility that follows it. None of the above-mentioned circumstances, preceding or accompanying it are principal causes of ophthalmia, therefore we must inquire, says the author, what are the local causes which excite it? The true cause, in his opinion, is to be found in the atmosphere of Egypt; in which he thinks a peculiar principle resides that excites ophthalmia. He argues, that strangers, when they arrive in Egypt, are affected with itching of the eyes, and sometimes of the edges of the eyelids; and that when ophthalmic patients leave Egypt, the disease very speedily disappears of its own accord. This principle he thinks is the muriatic acid. But can this chemical condition of the atmosphere be proved by experiment? He can only give force to his opinion by indirect facts; and it is founded in the following reasons. 1. It is reasonable to suppose that on every sea coast muriatic acid is evolved in greater or less quantity. 2. This acid appears to abound more in Egypt than in other countries, because every utensil made of iron or steel very soon becomes rusty. The rust might be attributed to moisture alone, but steel does not rust in much damper countries with the same celerity; therefore, it must be a more active principle residing in the atmosphere that produces it. The soil of Egypt, too, was found by Berthollet to be impregnated with muriate of ammonia. If the author is correct in this opinion, we shall expect to find ophthalmia prevalent in other warm countries, when muriatic acid is evolved from the sea by the heat of the sun, perhaps, even in greater quantity. Is it so? But the disease is always rendered worse by nastiness, unwholesome situations, and small crowded houses; so the disease at Cairo is much more frequent among the poor, particularly the Jews, than among the wealthy inhabitants. The principle, whatever it is, acts upon the organ of sight, and produces a discharge, which, like the matter of gonorrhœa, is able to propagate its like. Ollivier, in his travels,

has given an opinion on the cause of ophthalmia nearly similar to that of our author.

If the patient has a sound constitution, it is not difficult to cure him; but if the disease resists approved remedies, there is much reason to fear that the patient will become blind. Unless the disease has been very violent, or improper remedies have been used, it generally terminates favourably in eight or fifteen days; but if it goes beyond that time, the issue is uncertain. The degree of danger is not indicated by violence of the pain. If hemorrhage from the nose ensue it is always salutary. Dysentery and ophthalmia were found to alternate with each other; and if an ophthalmic patient was seized with diarrhœa, the ophthalmia generally disappeared; which is conformable to an aphorism of Hippocrates, though unnoticed by our author.—"Lippientem alvi profluvio corripi bonum."—HIP. *Oper. tom.* 1. *p.* 99. *Edit. Vander Linden.)*

Whoever in Egypt wishes to escape an attack of ophthalmia, should expose himself as little as possible to cold and moisture, particularly when he is very warm. With this view the natives have their heads always covered, whether they are close shaved or not; for they have observed, that when a bare head is exposed to a stream of cold air, the eyes are very easily affected with pain. As often as the head is shaved, they also find it useful to wash it with vinegar or lemon juice. They also anoint the tarsi with a slightly irritating composition, called cachel, in which is a proportion of frankincense, they say with advantage. Of the lotions which they recommend the author says little. The best prophylactic is to avoid intemperance. But if the person have naturally a delicate constitution, Dr. Frank recommends to him to take tincture of bark with the addition of steel to it; and as the bowels of such people are generally irregular, he was in the habit of giving aloes, so as to procure a motion once or twice daily. And as diet amongst the poor in Cairo seemed to favour its attack, it is recommended that raw onions, garlick, flatulent vegetables, astringent fruits, and the rancid oil with which fish is dressed should be avoided. The people also eat salt fish half stinking, which is supposed to favour the disease. The following are the general rules to be observed in the cure of ophthalmia: 1. To cover the eyes with a shade, and remain in a dark room. 2. To wash the feet daily with water either pure or mixed with an alkali. 3. Blisters to the temples, back of the neck or arms, are all equally useful in every degree of this complaint; but it is only when they act as rubefacients. 4. If the disease is severe, it is better not to apply any thing to the eyes but aromatic vapours. They are obtained from hot waters, in which

chamomile, elder, and lavender flowers have been infused. 5. When the disease is recent, and slow in its progress, the red ointment of St. Ives is used with admirable effect. 6. Scarifications at the outer corner of the eye, or on the brow, are useful in every degree of ophthalmia, not by the quantity of blood discharged but by their irritation. 7. As ophthalmia is a local disease, the patient's diet must be nourishing. When the digestion is perfect, it should consist of gelatinous broths, prepared with aromatics, juicy roasted meat, fresh eggs, wine, coffee, &c.; and when the digestion is weak, the same food should be given with some little variation according to circumstances, with the addition of aromatic waters, decoction of bitter herbs, and some kind of stomachic tinctures. In the debility which follows ophthalmia, the author gave strengthening food, and even spirits of wine diluted. One young man who had very severe ophthalmia, drank at bed-time about a pound of spirits of wine, and next day the disease was nearly gone. Dr. Frank thinks that their want of success in curing the ophthalmia of Egypt, was owing to the want of bark and other remedies of that kind.

He now treats of the particular rules adapted to ophthalmia in its different degrees of intensity. In the first degree, when it is not convenient to use the method of expectation, the red ointment may be used; and also in the second, along with the remedies mentioned in the general rules. In the third, the cure is nearly similar, only we must observe whether or not the disease is simply local or joined to great or subsequent debility. In the fourth degree, blisters as already mentioned, and scarifications and blisters over them were very useful; and the same utility, from similar means, the author has observed in Italy. In order to keep the eyes clear, he found great benefit from washing them with tepid water. In this degree of the disease all topical remedies are hurtful, except aromatic vapours, which, however, are useless, if the eyes are shut. Here the author has given internally, with wonderful benefit, to the extent of 2 drs. of laudanum in 24 hours, but he found that pure opium had a better effect. When the pain was severe at night, he gave a grain of it every hour, till the patient fell asleep. In this way he has given 12 to 24 grains of opium. If pain returns periodically, the opium must be given some hours before the attack. In this kind of ophthalmia venæsection is always hurtful. Purging, in most cases, was either hurtful or useless. As was said before, all the abdominal symptoms are sympathetic, and vanish with the primary disease; but if they are urgent, glysters or mild laxatives may be administered. Dr. Frank also disapproves of emetics.

The principal remedy in the fifth degree is the red ophthalmia ointment. This is made with three ounces of fresh butter, and a drachm of the red oxyde of mercury, mixed intimately with a wooden spatula into the form of an ointment. A particle of this, about the size of a hemp seed is to be introduced into the eye on a small round probe.

In using the red ointment the following rules are to be observed:—

1. The surgeon himself, or some one on whom he can depend, must introduce the ointment.

2. Its use must be discontinued for a time if it produce too much irritation.

3. It may be applied once a day at night, and, if the eye is not too sensitive, in the morning also.

4. If at the first application the patient feels relief, it may be predicted that he will be soon freed from his ophthalmia; but if after the first or second application no change is observed, it must be laid aside for some time, and afterwards it will succeed better.

5. This mode of inserting a determinate quantity of the ointment into the eye, and diffusing it generally, is much to be preferred to the method in common use. The author disapproves of collyria, or eye washes, unless they be employed with great circumspection, and almost in presence of the physician. The gluing together in the eye-lids, which is very hurtful in this disease, can only be prevented by the use of injections or washes of tepid water, day and night. The author paid much attention to the mode in which the natives treated ophthalmia, and he found that they never used topical remedies, but when the disease was commencing or on the decline. The consequences of Egyptian ophthalmia are numerous, and often difficult of cure. These are debility of the organ, staphyloma, dimness of the cornea, obstruction of the glands of Meibomius, erosion of the tarsi, and inversion of the eye-lashes. In his mode of curing these, there is little novelty. In dimness of the cornea, he found a mixture containing 5 ounces of distilled water, and 2 grs. of muriate of mercury very useful; a drop of it being introduced daily for some months into the patient's eyes as he lies in the supine posture.

The writer of this article had a severe attack of ophthalmia in the left eye, whilst on board ship in the bay of Aboukir, and which he caught from those who had brought it from the shore. His plan of cure was not quite the same as Dr. Frank's. He lived on water gruel for six days, took several doses of salts, and applied a blister on the temple next the eye. He also very

early in the disease put a drop of laudanum into the eye with a hair pencil twice a day. It gave him severe pain, but very soon after the eye got quite well. This plan he used very early in the disease with great advantage, in several other cases.

The following brief remarks on Egyptian ophthalmia were written about two years after our expedition to Egypt, by a gentleman, now of high rank in the medical department of the army. "The different stages of inflammation in ophthalmia, may very easily be discovered by attention to the appearance of the vessels upon the adnata, and this is a circumstance of no small importance in our attempts towards a cure. When the vessels on the eye ball appear distinct, perfectly round and firm, filled with florid arterial blood; when the discharge is thin, watery and acrid (for it used to *corrode* the edges of the tarsi); and when the patient complains of acute pain attended with a sense of tightness about his temples; increased action is evident. Bleeding, general and topical; scarification of the vessels on the eye-ball, smart purging with calomel, &c. are to be resorted to in the cure. When each particular vessel cannot be distinguished, when their colour is dark and venous, or the eye appears covered with a clot of blood, when the discharge is thick and purulent, and the pain dull and diffused, the inflammation depends upon debility in the centre of the vessels. Blisters applied to the neck, the temples, or over the whole head, and their discharge promoted afterwards, small doses of calomel in order to excite a gentle salivation, mild astringent applications, &c. are to be depended on. I am of opinion, that the Egyptian ophthalmia, dysentery, and fever of the country are intimately connected, and frequently alternate with each other."

Egyptian Dysentery.

Dysentery always exists in Egypt, and attacks Europeans more readily than the natives of the country. It is the same disease with the dysentery of the East Indies and similar countries. The author having paid much attention to the disease for several years, is persuaded that it is characterized neither by inflammation, putridity, nor malignity, and thinks that its nature is best expressed by the name of adynamic *or irritative dysentery*, or the dysentery of warm climates, which has its seat in the mucous membrane of the intestines. The author, with some English writers, believes that the liver is often, though not always, affected in this disease; but he thinks that in such cases it cannot easily be determined whether this is an effect or a cause of dysentery. He is of opinion, however, that the disease may

depend on an infinity of circumstances and modifications, which merit all the practitioner's attention, that he may be able to regulate the treatment accordingly. The author is rather disposed to doubt the contagious nature of Egyptian dysentery; at least the records of his practice afford no data to prove its existence. In order to justify the name of adynamic dysentery, he observes, that at all times digestion is performed very languidly by the native Egyptians; and that, from the slightest errors in diet, and other trifling causes, want of appetite, flatulence, diarrhœa, and even dysentery, are very apt to arise. The causes which produced it among the French were, fatiguing marches in the heat of day, sleeping in the cold night air exposed to a heavy dew, eating immoderately of water melons, and drinking excessively of water, after having been deprived of water for some days; too much venery, and intemperance of every kind.

This disease commonly makes its appearance in three forms; mild, violent, or chronic. It is generally preceded, for some days, by a slight diarrhœa; but for the most part it appears suddenly, or follows languid digestion and universal debility. The stools are always more or less bloody, and in stout men pure blood is passed. The author very rarely observed it to be accompanied by a fever of a fixed character, nay, sometimes, the arterial system was quite tranquil; although he has seen it connected with fever of the remittent and intermittent type. In persons of a stout constitution, it appeared at first, to be merely a local affection of the digestive organs, but if neglected, it speedily became, as in weak patients, a disease of the system, affecting particularly the organs of the abdomen. In this disease it is necessary to distinguish three distinct periods. The first extends from the moment of attack to the 10th day; and it is here that there is most danger and irritation; the second extends from the time of relaxation, about the 11th day to the 20th. If the dysentery lasts beyond the 20th, or at most the 30th day, it must be classed among the chronic dysenteries. Each period requires a treatment more or less different. Chronic dysentery at first shewed little appearance of danger, yet its symptoms, though less violent than in the other form of the disease, were extremely changeable. The patient's appetite was often good; yet, if he indulged it, the food he swallowed generally did him harm. In proportion to the duration of the disease, the stools are more frequent, and at length the patient becomes so weak that he cannot get out of bed. At this time there is a slight degree of slow fever, and more or less pain in the right and left hypochondria, and often suffering for two or

three months, the patient sinks under his complaint, and in spite of medicine. It is also much more fatal than acute dysentery. The usual appearances were observed on dissection, and sometimes abscesses of greater or less size in the liver. Are these the causes or effect of dysentery? The author is of opinion that they depend on passive inflammation, analogous to that adynamic kind of it which is observed in the ophthalmia of the country. This has been too often confounded with active inflammation; but it cannot bear the antiphlogistic regimen. This passive inflammation is denied by Tomasini, but for the complete refutation of his opinion, our author refers us to Spallanzani and Amoretti. In Dr. Frank's opinion, this peculiar inflammation has been mistaken in all dysenteries, both Egyptian and European, for active inflammation; and on this, he thinks, has perhaps depended our want of success in curing it. But passive inflammation is not always present at the very commencement of the disorder, unless it begins with great violence. He is inclined to the opinion, that the state of convulsive or oscillatory irritation of the larger intestines, particularly the rectum is the proximate cause of dysentery. The presence of active inflammation, as already stated, has been too readily admitted in this disease; nor does it appear that the opinion is much better founded, which ascribes it to bile or feculent impurities. It must be allowed, however, that no organ is so frequently affected in warm climates as the liver; and it would have been well if physicians had always kept this in view. Wedekind imagines that dysentery always depends upon the presence of an irritating principle in the blood, which attacks the rectum, and excites in it a greater or less degree of erysipelas; and Dr. Frank thinks, that this opinion is not altogether undeserving of attention.

With regard to PROGNOSIS, Egyptian dysentery, as well as that of Europe, must be considered as a dangerous disease, difficult to cure, and very often fatal. Many physicians thought it was more fatal in the French army than the plague itself; but probably this was more owing to the treatment adopted for its cure than to the disease itself. However, much might also depend on the intemperance of individuals, or on their being exposed to the causes already enumerated, or on the mal-administration of the hospitals appropriated for their cure. It is necessary that the patient should most strictly adhere to the diet prescribed by the physicians, if he have a wish to recover. In its chronic state, the liver being very commonly affected, it is a matter of great moment to attend to it; for if that organ be allowed to suppurate, the case is almost hopeless.

The first indication of CURE, is to remove, with as little delay

as possible, every thing which may increase or keep up irritation in the intestinal canal, and then, by every means in our power, to allay that irritation which is actually present. For this purpose, the patient's diet should be most exactly regulated, he should remain quiet, and when he goes to stool he should be well wrapt up.

If the disease begin mildly the patient may have a weak decoction of tamarinds for some days; but the instant it becomes severe, we must have recourse to mucilaginous remedies, particularly the solution of gum arabic. For ordinary drink, nothing is better than rice water, of which, however, a fresh quantity must be prepared every day, as it very easily spoils; or if there is severe colic an infusion of chamomile flowers, or anniseed, may be prescribed with benefit; and the author assures us that he has often used with advantage the oleaginous potions or the white decoction of Sydenham. Warm fomentation applied to the abdomen, and glysters which allay pain are also useful and necessary. But if these have no effect we must fly to more active remedies. It is the opinion of the native Egyptians, which is confirmed by experience, that as soon as a person is seized with dysentery he should instantly abstain from butcher meat, animal soup, eggs, greens, fruits, &c. This plan, on many accounts, could not be adopted in the French hospitals; indeed it appeared to most of the soldiers too harsh, and it was only men of sense who acknowledged the propriety of it. But even this diet must be taken in very small quantity at a time, otherwise it will occasion severe colic pains. When the period of irritation is over, the patient may be allowed a little *good* wine and a few cups of salep, prepared with cinnamon or nutmeg. Emetics, both of ipecacuanha and tincture of antimony, the author found hurtful; and, as he was persuaded that the disease did not depend on the presence of bile or saburræ in the intestines, he entirely laid them aside. Strong purgatives, he thinks, are equally improper. The foul appearance of the tongue is extremely fallacious; for in many patients Dr. Frank found it as clear as in its natural state. The only remedy which he employs in the commencement of this disease, if there is too much irritation, is a weak decoction of tamarinds, or a small dose of cream of tartar; but he does not employ these remedies to increase the secretion of the bowels, but only to abate or allay the patient's thirst. To prevent them from taking too much drink, he advises his patients to wash their mouths often with pure water; from which they usually received the greatest benefit. He likewise allowed them to suck the juice of pomegranates; but it was only where they were quite ripe and sweet

that they really did good. The thirst is likewise alleviated by small slices of orange.

When the patient suffered violent pain both day and night, camphorated oil rubbed over the belly; warm fomentations and glysters were of great service; but of the latter, never more should be thrown up than four or five ounces, as a greater quantity might increase the irritation of the rectum, which is always present. As glysters, all mucilaginous substances with the addition of a little oil or from 30 to 50 drops of *laudanum* were useful; injections of milk, oil and yolk of an egg, beat up with turpentine often gave much relief, but it must be confessed that there is no remedy which is at all times useful in alleviating the pains of this terrible disease. The powder of burnt oyster shells, he had strongly recommended to him by a physician of Corfu when the dysentery is not very dissimilar to that in Egypt; and there are many instances on record where the powder of dried bones has been of essential service. So far has the author spoken of the period of irritation, which oftener yields to other remedies than what are here mentioned, if the patient is obedient and the attendants careful. But such were rarely found amongst the French soldiers or in the Egyptian hospitals.

If with the help of medicine the dysentery is not cured in 10 or 12 days, it may be said to be in its 2d period, that of debility and relaxation. Then all the symptoms become milder, though the patient still suffers a good degree of uneasiness at night; and there the author found that the tonic, anodyne, and mucilaginous medicines were of most service. His best tonic was the simarouba, which he used in decoction for five or six days in the quantity of 2lb. in 24 hours. He also used it in powder, with success in the quantity of 3 or 4 drams in 24 hours. If pain still continues, laudanum is to be given in some mucilaginous draught; but it must be given in divided doses at proper intervals; Dr. Frank having found that a draught given at bedtime did not answer so well. He also found that rhubarb conjoined with magnesia was an excellent tonic in this disease. He was sometimes obliged to lay aside both rhubarb and simarouba, and substitute ipecacuanha in their place, and this in the dose of two grains every two hours, he found an excellent remedy, although it did not always answer.

In the third period of dysentery, or the chronic kind of it, which extends from twenty-five to thirty days, none of the symptoms are troublesome, the stools are less frequent, but they are still liquid, mucous, and more or less mixed with blood. The disease may seem almost cured, but often a very trifling cause will restore all the symptoms to even more than its pris-

tine violence. In short, this is a disease, to which the physician cannot direct too much of his attention, as its varieties are infinite, and a remedy which in one case is most salutary, in another is useless, or in a third even hurtful. The remedies in chronic dysentery are still tonic, as rhubarb, ipecacuanha, simarouba, and above all toasted rhubarb and decoction of cinchona, &c. The natives use myrobalans in this disease, and our author followed their example with success, giving from 10 to 15 grains of it several times a day; and he often added to it small doses of rhubarb. He also often gave a solution of alum with a happy effect; in the dose of 2 or 3 grains. Another remedy is the fruit baobab, the production of a gigantic tree known to botanists by the name of Adansonia. It is the farinacious part of this fruit which is of a reddish colour, and surrounds the seeds that is made use of. Its dose is from 20 to 24 grains. It is used both in acute and chronic dysentery. The Egyptians also use the seeds of sumach (*Rhus coriaria*, LINN) with benefit; and they give a little of it to the patient every time that he takes a portion of dried cooked rice. This remedy Dr. Frank has often used, and he thinks it deserves the attention of physicians. He also obtained advantage from caoutchouc, given in a dose of 10 grains in 24 hours, either in powder, with sugar, or in solution. He also used date kernels toasted and powdered, and then given in decoction. He also found Dover's powder useful, when given in a warm infusion of valerian root. But the most successful of all remedies was nux vomica. He often gave from 4 to 20 grains, three or four times a day, mixed up with some agreeable liquid. It should be filed down into a powder, and then mixed with gum tragacanth into a paste, and when dried, the paste should be reduced to a powder. Toasting it in order to make it more easily powdered, as most apothecaries do, undoubtedly impairs its virtues. Colombo powder is also a very efficacious remedy; but the author had no opportunity of trying it in Egypt. When in chronic dysentery violent pains are felt in the bowels, we may use externally, the remedies already mentioned, and may give internally laudanum, or Hoffman's anodyne liquid. The author disapproves of applying blisters or sinapisms to the belly. He can say nothing about the warm bath, as circumstances did not permit its use in Egypt.

The author now mentions the use of flannel as recommended by Dewar; glysters of acetate of lead; and bleeding, by Jackson and Borland; and the cold bath, as used in warm countries by Bontius and others. He speaks also of the success that Bontius had with the extract of saffron, and others with the vegetable œthiops, which is opium dissolved in vinegar, and then evaporated by heat to dryness.

The grand point in this disease is to prevent a relapse; wherefore the patient should pay the strictest attention to diet, should wear warm clothing, should not expose himself to cold in the night time, and should use a good deal of exercise, but so as to avoid fatigue. The best prophylactic means, are the avoiding of every thing that debilitates, or that suppresses insensible perspiration. The author, therefore, recommends the moderate use of Cyprus wine and cinchona, of which a drachm may be taken two or three times a day. The author next speaks of some neglected remedies: Dr. Wedekind affirms, that with flowers of sulphur, in the dose of a scruple every three hours, mixed with an equal proportion of gum arabic and sugar, he had repeatedly cured dysentery. The same physician, also recommends sal ammoniac, in the dose of from 10 to 15 grains; and likewise wax, one of the most ancient remedies, mixed up with gum arabic, syrup of poppies, and enough of white acid elixir of Dippelius to give it a pleasant flavour.

The author next gives a number of cases to show that dysentery has been unexpectedly cured by extraordinary or even very simple means, when the patient's life had been despaired of; by a drastic purgation; by leaving the hospital, and using no remedy whatever; by drinking plentifully of wine; by poison administered to kill; by fear; by a piece of brick made red-hot, then cooled a little by pouring vinegar on it, wrapt in linen, and repeatedly applied to the anus till it cooled; by putting a little of an ointment prepared with fresh butter, turpentine, opium, and sugar into the rectum every time the patient had a stool; by change of place, as from Cairo to Rosetta; by eating salt fish, and drinking rum after it; and by getting drunk with mulled burgundy. As fear has sometimes cured it, the author proposes to tie the patient hand and foot, and with a red hot iron to make as if it were intended to run it into his anus! And he defends such practice, by informing us that Roderic de Castro proposed in this way to cure a prolapsus of the uterus. We shall give part of this curious passage in the original, as a specimen of the author's style. The reader must suppose the patient disposed to undergo a severe but salutary operation, laid on his bed, tied hand and foot, and held by two men. "Hoc momento chirurgus cum ferro candenti, figuram coni habenti, coram ægroto compareret, et id versus anum dirigeret, quasi id ano intrudere vellet." For the cure of dysentery in warm countries by mercury, he gives an extract from the London Medical Journal, Vol I, and refers to Moseley, Clark, Lichtenstein, Hulstow, and Lind, all guided to the use of this remedy by the liver having been found in a diseased state in the bodies of those who have

died of dysentery. Here Dr. Frank confesses that he must have erred, in supposing in the early part of his practice, that the affection of the liver was only an effect of dysentery. He thinks the practice of Dr. James Johnston, in giving such enormous doses of calomel, and so rapidly, too daring. Dr. Frank's work, of which we now finish the analysis, is written in a plain but remarkably perspicuous style, and much more so than his uncle's; but it wants his energy and talent; several of his observations being extremely puerile, and very rarely if ever marked by philosophical acumen.

MELI ON THE VITALITY OF THE GRAVID UTERUS *.

It is the common opinion of physiologists that the uterus while unimpregnated has no other vital properties than organic sensibility, and insensible organic contractility or tonicity; but the author of this little work endeavours to show, that at the period of menstruation it assumes two other properties, namely, animal sensibility, and sensible organic contractility or irritability; and that these are commonly latent, and only show themselves under certain circumstances and particularly at the time of the menstrual evacuation. Besides these, he attributes another vital property to the uterus which only appears after the occurrence of conception, namely, the property of active dilatation, which he distinguishes from the mere extensibility of the uterus.

From the facts and arguments, he thinks the following conclusions may be derived. 1. That the vital properties of the uterus when empty and in a state of inaction are different from those which animate it after conception and during pregnancy.

2. That physiologists have not sufficiently distinguished those properties which are developed during pregnancy from those which exist before it in a latent state.

3. That the property of active dilatation is peculiar to the uterus in a state of pregnancy, whilst animal sensibility and irritability pre-exist in the manner already mentioned.

4. That much attention is necessary to distinguish the property of active dilatation from the extensibility of the uterus;—the animal organic sensibility; and the sensible from the insensible organic contractility, that is, irritability from tonicity.

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* Delle proprieta vitali dell utero gravido e de' parti che avvengono dopo la morte. Del' Dott. Fisico Meli. Milano.

5. That the sensible organic contractility is the sole power employed in affecting parturition; that it is occasionally prematurely excited to action by the animal sensibility; that possibly the latter is the means by which it is excited even at the natural period; that it acts with great force, and is capable of overcoming incredible obstacles; that it retains so much force for a considerable time after apparent death, as to be capable of effecting parturition; and that when this process takes place after the total extinction of vitality (a circumstance which to us appears quite impossible) it is owing to the developement and compression of the gas derived from the uterus and the fœtus.

Such are our author's principal conclusions, some of which appear to be very far fetched and of small utility. We cannot spare room to go farther into his details, and those who feel an interest in them, we must refer to the work itself which is, perhaps more ingenious than sound both in fact and in argument.

Dr. Weller's new operation for Artificial Pupil *.

The methods of operating for artificial pupil, must necessarily be varied according to the circumstances of the case. In one case, we should, accordingly, prefer corotomia; in another corectomia; and in a third corodialysis; and not only so, but we should vary each of the operations according to the state of the iris and its connections or morbid adhesions. As these, however, are sometimes unmanageable and complicated, all the varieties have not hitherto been attended to sufficiently, to lay down the best methods of operating suitable to every case which may occur.

An improvement in the operation is required, for instance, where there is cataract, either with closed pupil, or with the iris adhering in part or in the whole of its circumference, and where the exuded lymph, during inflammation, having so widely spread over the uvea, that the iris adheres to the ciliary ligament and neighbouring parts, more firmly than in its natural state.

Dr. Weller was led to form this opinion from the dissection of two eyes with closed pupils. In the one the pupil had been obliterated in consequence of syphilitic iritis; in the other, in consequence of extraction of the lens. The subjects of both

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* Ueber künstliche Pupillen, und eine besondere Methode, diese zu fertigen; von Dr. Carl Heinrich Weller, practischest Arzte und Augenarzte zu Dresden. Langenbeck's Neüe Bibliothek. Dritter Band. Viertes Stück.

cases had, he was assured, retained a slight perception of light in their injured eyes. After carefully opening the eyes, there appeared in the posterior chamber, coagulable lymph, which had spread over the uvea, and had occasioned very firm adhesion between the ciliary edge of the iris and the neighbouring parts. The corpus ciliare had a deranged appearance, and was not only covered with fibres and small flakes of lymph, but had become so confounded with the surrounding parts, as scarcely to be distinguished. The still remaining lens of one of the eyes was affected with cataract *(cataractös)*. The anterior paries of its capsule adhered almost universally to the iris. The capsule of the other eye, which had been left, was very much shrivelled, and occupied nearly the middle of the iris, seeming to be surrounded with a web of lymph, and especially on one side was firmly attached to the partly removed pupillary margin of the iris. The anterior chamber was present in both eyes, the cornea transparent, and the pupillary margins of either iris in a tunnel-form manner, turned backwards into the posterior chamber; the structure of the posterior half of these eyes, was to all appearance healthy. Although the syphilitic eye had become smaller, yet the vitreous humour was uninjured. The substance of the iris had become much firmer. In trying to separate the iris from the ciliary ligament with the hook, a rent was produced by it in its substance.

Experiments with these, as well as with other diseased eyes, have convinced Dr. Weller, that when lymphatic exudation in the posterior chamber renders the corodialysis impracticable, the iris is most easily torn about three-fourths of a line, or a line, from the still perceptible pupillary margin, and that this rent generally takes place, whatever may be the form or sharpness of the hook, chiefly in a perpendicular or more concentric direction, to the middle point of the closed pupil. In the cases which came before the author, the iris was torn in the neighbourhood of the pupillary edge, much easier than in that of the ciliary edge. Close to the pupillary margin he found the disorganised iris very weak, almost pulpy, whilst, according to Assalini, in the healthy state, the substance of the iris, although it appears thinner, is more firm and rigid as it approaches to the pupillary edge, than the larger circumference, which is, indeed, thicker, but more loose and tender. Why the inserted hook should, by gentle pulling, effect a more or less concentric opening in the iris, the author cannot discover.

The cases are not rare, according to Dr. Weller, in which through the exuded coagulable lymph, reaching even to the larger circle of the posterior membrane of the Iris, and produc-

ing unnatural adhesions, the iridodialysis cannot be effected, and the instrument, applied without judgment, tears the membrane. Amongst these are especially reckoned atresia from syphilitic iritis. The following marks are given, to discover the state of widely diffused exuded lymph which contra-indicates iridodialysis. The colour of the iris, not only in its small but in its larger circle is more or less changed, it appears as if irregularly interwoven with silken threads: the large circle has no determinate boundary, and the fibres appear to start forth much more prominently from behind the cornea. The degree of sensibility to light is no criterion.

There is also a case in which iridodialysis is difficult, namely, where there is closed pupil with adhering cataract, by which the anterior chamber is rendered smaller in its circumference, but larger in its central part, the shut pupil being drawn backwards in a tunnel-form (*trichterförmig*) manner. In these cases there is also adhesion with the cornea. When in atresia with adhering cataract, iridodialysis is selected; the cataract will not always allow itself to be pulled out, but the slender adhesion between the uvea and cataract will be broken, and the cataract will remain, only there will appear an obscure transparent spot in the circumference of the cataract, but not in the centre where it is adherent with the pupil. In this small lateral pupil, the rays of light can be admitted but in small quantity, because they will be intercepted by the corona ciliaris. Extensive lymphatic exudation, intimate and firm adhesion of the ciliary margin, and adhering cataract, seem to our author, cases in which the modes of operating, hitherto practised, are inapplicable, but to which his mode is suitable. Before describing his method, we shall state, first, the condition of the eye upon which he tried it.

Miss L—, 17 years old, was in consequence of a probably scrophulo-rheumatic ophthalmia, blind of both eyes and had been so five years, yet there remained in her right eye a feeble sensibility to light. From all circumstances it was concluded that the inflammation had affected the whole globe. The cornea was transparent, the anterior chamber tolerably large, but the *bulb* somewhat enlarged, and around the cornea was a bright bluish ring in the upper part of the *bulb*. Schlerotic staphyloma had taken place, along with varicose vessels; the iris was spongy and the pupil closed from firm exuded lymph, and drawn-tunnel, formed, backwards, and the ciliary margin, here and there, adherent to the cornea. In this eye, according to our author, no one could perform iridodialysis, because the iris, on account of the firm adhesion, would not have admitted of separation and the instrument must have torn the iris. He proceeded

therefore in the following manner.—He pierced the cornea with a cataract knife half a line from its circumference, towards the outer angle of the eye, introduced through this opening a hooked needle which was not larger than the cataract hook of Beer, but bent in a larger circle, therefore more of a needle shape —not round in the convex part but in the first part of the bending a little broad, and in the outward sharp pointed end, lancet shaped, in both edges fully rounded and blunt.

It was introduced into the anterior chamber, so as that the edges of the point were directed upwards, and those of the handle downwards; the point itself, however, which was turned neither towards the iris nor the cornea, he pushed suddenly through the anterior chamber to within a line's breadth of and above the still perceptible pupillary margin, towards the angle of the eye, then without injuring the iris he turned the instrument so that the sharp point immediately touched its internal and upper part, and gliding perpendicularly downwards upon the anterior surface, made a superficial incision of the length of the half of the entire breadth of the anterior chamber, in which operation so little pressure was applied that the iris was only incised not cut through. After this incision, the instrument was turned backwards from below upwards to the middle of the incision; the iris was pierced through with the point, the instrument was then withdrawn somewhat towards the point of entrance through which manœuvre a tolerably long, but on account of the lying behind cataractous lens, irregular, unequal slit in the iris was produced. The instrument was now, with the edges of the pointed end upwards, and with those in the handle downwards, carried in a horizontal direction again along the sort of engravure in the iris, and afterwards into the incision made in its substance. It was pushed forwards and inwards, nearly half a line farther—towards the internal angle: and without minding the iris set free, so turned that the edge of the lens, which is directed towards the internal angle of the eye could be seized fast with it; now the instrument was so turned, that the pointed edges were situated half inwards and upwards, those on the handle half outwards and downwards, and carried backwards towards the corneal opening, by which the whole lens was pulled with its perpendicular axis into the newly formed pupil, and, in such way that the internal margin of the lens was before, the external behind, and the posterior surface turned towards the inner angle of the eye, the anterior towards the external. Dr. Weller attempted by varied movements of the instrument to tear as much as possible the cataractous substance, without thereby forcing the lens out of the newly formed pupil, and then

drew out the needle with the edges directed in such a way as not to lacerate the wound in the cornea.

The new pupil was apparently large, oval shaped, and its situation in the middle of the iris, though rather somewhat turned towards the internal angle. The cataract stretched so far into the anterior chamber as almost to touch the cornea, the bleeding of the iris was not remarkable. On account of headaches which supervened, and also of sparks of fire seen by the patient, a proper quantity of blood was taken from the arm, and ten leeches applied which removed those symptoms.—Morning and evening, a grain of calomel was administered, and the most severe regimen observed. In thirteen days, the absorption was remarkable; three weeks after the operation, there could only be seen a thin tissue in the pupil. In other fourteen days, even this was removed, and the pupil appeared fully black; the patient could distinguish colours only tolerably, could see the window and perceive a man standing before her, as through a mist, because the retina had been injured by the inflammatory process which had preceded the operation.

Tiedemann on the Fœtal Brain*.

In our analytical review of the additions to Bichat's Anatomie Générale, by Beclard, we had an opportunity of incidentally mentioning the researches of Professor Tiedemann, on the formation of the human brain. Their importance and novelty, however, are such as, we think, deserve a distinct consideration, and in the present article, it is our intention to give a short abstract of the most remarkable facts and opinions contained in the work before us.

The best observers, at all times, have not failed to anticipate the advantages which might attend the comparison of the human structure with that of other animals, for the purpose of ascertaining the composition and functions of complicated organs. Though not less real, the utility of investigating the manner and order in which different parts of certain organs are formed, has, perhaps, been less insisted on. It is from the combination of both these methods, that Professor Tiedemann has arrived at the results contained in this treatise.

* Anatomie und Bildungs-Geschichte des Gehirns des Fœtus in Menschen, &c. Bei F. Tiedemann der Anatomie und Zoologie zu Landshut, Professor, 4to. Leipzig.

His object has been, to prove that the brain of the embryo is by no means the complicated organ we observe in the adult, but, that originally, extremely simple, it is gradually developed, either by the addition of new parts, or by the increase of those already existing; he, at the same time, attempts to demonstrate that the laws, by which the formation of the brain in the human embryo, and in the lower animals, is regulated, are precisely the same. With these views he has compared the encephalon of the fœtus at various periods, with the state of that organ in various animals, and has shown, that in all its stages it corresponds to various individuals in the animal scale, and that its simplest condition, at the earliest periods of existence, is precisely that met with in the lowest animals.

The first object demanding our attention is his description of the canal of the medulla spinalis. According to him, the spinal cord contains a canal communicating with the fourth ventricle, by means of the calamus scriptorius; the margins of this canal, at first soft and floating, become adherent in the third month, and the tube thus formed, progressively diminishes in size, in proportion as the pia mater, by which it is covered, secretes more cerebral matter. In the adult, some traces only of it remain in the upper part of the spinal cord. Dr. Tiedemann distinguishes this canal from those which Gall describes, as passing through the crura cerebri, and reaching to the optic thalami; he denies their existence, and attributes them to artificial inflation: the canal he has described, though obliterated in the adult human subject, always remains pervious in birds, reptiles, and fishes.

Gall has asserted that the spinal cord is composed of ganglia of cortical matter, corresponding in number with the spinal nerves. Tiedemann observes, that were this the case, these ganglia should be particularly distinct in the uncompleted embryo, in which, on the contrary, the spinal cord presents nothing resembling ganglia.

In opposition also to Gall, he asserts, that the cortical matter is not the matrix of the nerves, but that, on the contrary, it is formed after the medullary matter, and that the origins of the spinal and cerebral nerves are visible before the least trace of it appears. He allows that the cortical matter is most abundant, where the largest nerves arise, and that at the earliest periods, the spinal cord is wider, and its canal larger at the origin of the nerves of the upper and lower extremity.

The continuity of the medulla oblongata with the crura cerebi, is, according to Professor Tiedemann, an incontestable fact. He shews that the *pons varolii* is not formed until the fourth month, and that, before that time, nothing interposes between

the crura and medulla oblongata: each of the two cords composing the medulla spinalis divides in the medulla oblongata, into three smaller ones; of these, the inner or pyramidal, placed on the outside of the longitudinal groove of the spinal marrow, forms, in the fourth month, a large flat surface, as in birds, reptiles, and fishes; the pyramidal prominences do not appear until the fifth month; its decussation, with that of the opposite side is visible in the fourth or fifth week. The middle cord, or cord of the *corpus olivare* is placed over the former, some of its fibres ascending to the *tubercula bigemina*, and uniting with those of the opposite side, to form the *aqueductus Sylvii*, whilst the remainder proceed to the the *thalami optici*, where they meet with the fibres of the first cord, of the *corpus pyramidale*. The corpora olivaria do not appear externally until the seventh month. The external cord, or that of the *corpus retiforme* arises from the lateral and posterior part of the medulla and sides of the ventricle, and then penetrate the cerebellum. The *thalami optici* are formed by the union of the fibres of the first and second cords, that is, of the *corpus pyramidale* and *olivare* on each side. From the side of each *thalamus* some fibres are detached towards the *corpus mamillare;* the remainder are continued from behind forwards and from within outwards, through the *corpus striatum* into each hemisphere. The hemispheres of the brain are membranous expansions reflected on themselves from without inwards, and from before backwards. The truth of this assertion is evident in the second month, when the hemispheres present two absolute, but delicate membranes produced by the expansion of the crura cerebri, and which are unconnected at their inner and posterior margin. The increase of the *pia mater*, and the deposition of new strata effect the increase of the parietes of the hemispheres. It is by means of this circumferential radiation or deposition of nervous fibres that Professor Tiedemann explains the formation of the circumvolutions, which do not appear until the seventh month. Gall, on the contrary, supposes that they arise from the folding of the membrane originally composing the hemisphere.

Tiedemann asserts, that the method employed by that author to demonstrate the unfolding of the convolutions, produces invariably the rupture of the inner layer of fibres detached inwards from the outer side of the crura cerebri, and that it is quite inconclusive.

He denies also the existence of a set of fibres converging and forming the commissures in the manner supposed by Gall, who

described them as arising from the grey matter of the convolutions, and decussating those which originate from the crura cerebri. According to Tiedemann the *corpus callosum*, one of these commissures, exists in the fourth or fifth month, a period when the brain presents neither convolutions nor grey matter; it is in fact formed by the union of the fibres arising from the crura cerebri, which, when they have acquired a sufficient length, are connected transversely with those of the opposite side. Hence, although not existing in the first months, it gradually increases in proportion as the fibres of the hemispheres are elongated, and is formed from before backwards.

He agrees with Reill in describing the *fornix* as being formed from above, downwards; its columns are composed of fibres arising from the *thalami optici* and descending to the *corpora mamillaria;* like the *corpus callosum*, it extends horizontally backwards in proportion as the mass of the hemispheres is more developed.

From the direction of the fibres of the *septum lucidum*, he concludes that they arise from the anterior pillars of the fornix, and asserts that the cavity between its layers presents, in the fœtus a small triangular aperture situated between the anterior columns of the *fornix* and the *anterior commissure*. This opening forms a communication with the third ventricle, admits the entrance of the *pia mater*, and is sometimes found open in the adult.

Gall classes the *anterior commissure* in his imaginary system of converging fibres. Tiedemann proves, that it arises from the fibres of the crura cerebri after their passage through the *corpora striata;* some of these fibres then pass forwards, bend inwards, and are there united with those of the opposite side; so that this commissure, which begins to appear about the third month, unites the radiations of the *crura cerebri*, the *corpora striata*, and the anterior lobes of both sides.

The *pineal gland* and its peduncles, Professor Tiedemann considers is forming a commissure of the *thalami optici*, with the addition of a mass of grey substance.

He coincides in the opinion, that the anterior of the *tubercula bigemina* on each side is to be considered as the origin of the optic nerve, but differs from Gall and Cuvier, who suppose that the olfactory arises from the posterior.

He agrees very nearly in the description which Reill and Gall have given of the *optic thalami*. According to the former, they are destined to increase the volume of the fibres of the *crura cerebri;* to give them a greater extent, and a radiating or circular direction. The same observations are applicable to the *corpora striata*.

The Wenzels were the first to describe the *cornu ammonis* as a fold of the hemisphere formed by the expansion of the *crus cerebri*, and uniting with the posterior pillar of the *fornix* to form the *corpus fimbriatum*. Tiedemann considers the *hippocampus* as a mass of reinforcement for the posterior column of the *fornix*, being a thick stratum of grey matter deposited on the descending fibres of that part.

Gall supposes that, like other parts of his system of converging fibres, the *tuber annulare* arises from the grey matter of the convolutions of the cerebellum; Tiedemann asserts that it exists at a time when no grey matter is present there, and that it arises from the medullary centre of the cerebellum, increasing in size as that part and the hemispheres of the cerebellum are more developed.

The results of Professor Tiedemann's researches on the relations of the brain and spinal marrow may be reduced to the following points.

1. In the beginning of pregnancy about the second month, the brain is very small when compared with the spinal marrow, and is formed by the prolongation of the two principal portions of the spinal cord, namely, the corpora olivare and pyramidale, on each side, upwards and forwards. Its upper part is open, or properly speaking, forms a large tube, including the *third ventricle, aqueductus Sylvii, fourth ventricle* and *calamus scriptorius;* this tube is continuous with the canal extending through the spinal cord.

2. The cerebellum arises from the lateral part of the spinal marrow by a small flattened band on each side; these bands though originally distinct and separable without laceration, ultimately unite and form the lower part of the *fourth ventricle*. It is not until this time that the brain, viewed from above, ceases to represent a tube; and a little later the layers and ramifications of the cerebellum begin to shew themselves.

3. The mass which supports the *corpora bigemina* first presents itself under the form of two delicate membranes derived from the *corpora olivaria* and which afterwards form the roof of a large ventricle, in progress of time gradually contracting into the narrow diameter of the *aqueductus Sylvii*.

4. The nervous cords of the *corpora pyramidalia* which take a direction from below upwards, and from behind forwards, after having formed two ganglia or enlargements on each side the *thalami optici* and *corpora striata*, are each expanded into a layer which turning from before backwards, and from each side upwards and inwards, constitute the beginning of each hemisphere of the brain. These membranes or delicate hemispheres are so small in the second month as scarcely to cover the *cor-*

pora striata. As they increase they extend backwards, covering, in the third month, the *thalami optici*, in the fourth, the *tubercula bigemina*, and in the sixth and seventh, the *cerebellum;* the lateral ventricles arise from their inversion.

5. The nervous fibres of the *corpora pyramidalia* previous to the formation of the *tuber annulare* are quite continuous with those of the *crura cerebri*, whence they may be followed by the eye through the *thalami optici* and *corpora striata* to their radiation in the hemispheres.

6. The parietes of the hemispheres gradually increase in bulk in proportion as their surface is covered by the deposition of additional strata of cortical matter; and the convolutions are not visible until towards the end of pregnancy.

From these facts he considers it as incontestably proved that the brain and cerebellum are formed by, and are as it were prolongations of, the spinal cord. This assertion is still farther confirmed by the examination of different individuals in the animal scale; the structure of the encephalon and spinal cord becomes more complicated as we pass from fishes to reptiles, birds, and mammalia. Besides the plates attached to the work, Professor Tiedemann preserves in his museum specimens of the fœtal encephalon in its various states, which he considers indispensable at a period when we too often find objects described and delineated which have no existence in nature.

We may in the last place remark, that in our analysis we have confined ourselves to the principal conclusions contained in the treatise, and comparatively neglected the purely descriptive portions, which, as must be evident, do not admit of abridgement, without considerable risk of being rendered obscure or unintelligible.

PALLETTA'S PATHOLOGICAL ESSAYS.*

THIS is the work of a veteran in surgery, who ranks, we believe, in Italy, next to the venerable Scarpa. We can, at present, only afford room for a very brief notice of some of the subjects of most interest which he has undertaken to elucidate.

Some POLYPI are incurable, either in consequence of their connections with other parts, or of their malignant disposition, in which cases an operation will only accelerate death. He gives several cases, in which the polypus had destroyed the cribriform

* Exercitationes Pathologicæ. Auctore Joanne Baptista Palletta, Equite a corona ferrea honorisque legione. 4to. Mediolani.

plate of the ethmoid bone, and the orbitar process of the frontal bones, and had thus penetrated the cranium. In two cases, the polypi were produced by the use of cold water, adopted to suppress epistaxis. When nasal hæmorrhage occurs in consequence of the abrasure of the pituitary membrane covering the ethmoid cells, it is exceedingly difficult to stop it, and the surgeon is often, in consequence, baffled in all his efforts. In deep-seated polypi, M. Palletta recommends a partial extirpation of the tumour and a palliative treatment.

He agrees with M. Walther in the opinion, that POLYPI of the UTERUS arise from a secretion of coagulable matter adhering to the inner surface, in consequence of its tenacity, preventing its separation from the vascular extremities, and converted into cellular membrane. This effect is more easily produced when there is a slight phlogosis, as there is not only a greater secretion of lymph, but the vessels become more active, and shoot more readily into the newly organized substance. He is of opinion that this is not confined to the internal membrane, but, may take place in the substance of the uterus itself; and he has confirmed the observation of Levret, by seeing a polypus arising from the fundus uteri, actually covered by the internal membrane. He gives his authority in opposition to Levret, that the uterus can be extirpated in cases of schirrus, as has been asserted by Benivieni, Carpi, Hollerius, Berewgari, and, more lately proved by Petit, Clarke, C. Johnson, &c.

In treating of inflammation of the VEINS, which he proves by cases, and also inflammation of the lymphatics, he claims precedence in having advanced the opinion, that the veins sometimes act as absorbents. In particular, he has observed veins take up purulent or sanious matter from an ulcer or an abscess, and carry it into the circulation. This adds another celebrated name to support this doctrine which has lately attracted so much notice.

From a case of REGENERATION, of a portion of the TIBIA, five inches in length, M. Palletta infers, that the new osseous substance was not formed from the periosteum, as that had been destroyed by caries, but from the remaining portion of healthy bone; (*see* WEIDMANN *de ossium necrosi*), that the newly formed skin over the bone has not its regular structure; that the muscular substance is never reproduced; and that the regular formation of fibres and vessels is never met with in the new as in the original parts.

In treating of ISCHIAS, M. Palletta appears to confound two very distinct diseases—nervous sciatica, and disease of the hip-joint: and consequently his treatment is far from being precise. He refutes the opinion of Cotunni respecting nervous Ischias

and shows that the symptoms peculiar to the disease, such as shortening of the joint and claudication, cannot arise from any affection of the crural or sciatic nerves, but must be traced to some disease of the articulation itself. This disease he considers to be inflammatory, and confirms from his own observation the opinion of Ruysch that the joint is very susceptible of phlogosis, either acute or chronic, according to individual temperament, and other circumstances; and this may be produced by gout, scrofula, syphilis, injuries, &c. He tried the antiphlogistic treatment, but with little effect. On dissection, he found some alteration of the round ligament, as of the articular surfaces. In one case he tried an issue below the knee, as recommended by Scultetus, but without effect. He places more dependance on blisters, and when active remedies failed, he says he obtained some advantage from mere simple unguents.

In speaking of FALSE ARTICULATIONS of the humerus, he remarks, that it is a fact well known in pathological surgery, that fractured bones sometimes fail to unite in spite of all the resources of the art. It is not perhaps so generally understood, that in many instances of this kind, and in a case in particular, here given by M. Palletta, a structure is produced very analogous in properties to the natural joint.

M. Palletta gives an account of two cases of uncommon *tumours* in the neck. The first was produced from caries of the cervical vertebræ and proved fatal; the second was probably a lymphatic or a scrofulous tumour, as it yielded to caustic applications.

With respect to TUMOURS of the BONES and fungous tumours of the dura mater, independent of what has been written by Haller, Lovis, and some later authors, much remains still to be done; and though our author has given us some judicious observations, we think he has not been very successful in carrying us beyond what was formerly known. In one instance he is, we think, decidedly in error, supposing that the congenital bloody tumour met with on the head of infants, receives its blood from the vessels of the diploe, while the external table of the skull is altogether wanting. We are aware that this opinion has been maintained by many celebrated men as well as Palletta, but evidently without due consideration, as it is unsupported by facts. He describes this tumour as usually arising on the right parietal bone about the size of an egg, soft, fluctuating, and not discolouring the integuments. The absence of pulsation distinguishes it from cerebral hernia. He agrees with Moscati, that a seton will speedily reduce tumours of this kind, particularly if a free discharge of blood follows.

These brief notices will give our readers some idea of the work of Palletta, the result of forty years of active and extensive practice. The book, indeed, is chiefly filled with cases, and remarks upon them, which admit of extract or selection, but are not susceptible of abridgment. We shall not lose sight of these cases, however, but shall, in our future articles, draw freely upon them for illustration; for though, as we have seen, Palletta is in many things behind the improvements of the present day, there is always something to be learned from the writings of a man of genius, even when he is not quite correct in his opinions.

British Review.

Dr. Baron on Tuberculous Diseases*.

In the performance of our critical labours, when we meet with an able and intelligent writer, our task is comparatively easy; but when we encounter one whose ideas are not clear, and whose style is harsh and intricate, our duty is painful, for we ourselves may incur blame, if we allow the delinquencies of such a writer to pass unnoticed. But in regard to our criticisms, we hope we shall be able at all times to say

"Nothing in hate, in honour all was done".

We hesitate not to say, then, that Dr. Baron is no ordinary writer. His pages are replete with learning, intelligence, and observation, and his style is pure and fascinating. The introduction to the work is clear, nervous, and concise. He observes that he has no attachment to any of its doctrines, except in so far as they are conformable to truth; and he begs the reader to believe that they were adopted on solemn conviction, after mature and impartial enquiry. He expects, therefore, that the reader will not reject them hastily.

In examining the opinions of other men, he became aware, as he informs us, of the numerous obstacles which retard the advancement of medical knowledge; many of them, no doubt,

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* Illustrations of the Enquiry respecting Tuberculous Diseases, by John Baron, M. D, 8vo. pp. 238. London, 1822.

depending on the intricacy of the science itself, but others, too often, in faulty methods of pursuing investigations or recording experience. Indeed, certain conceits of their own, have not unfrequently withdrawn physicians from nature, and made them substitute their own fancies in place of her works. Much confusion, also, has been introduced by the imperfections of language and the abuse of words. Faults of this nature, it is true, may have been more prevalent in former times, but they are met with even in the medical writings of the present day. Indeed, in these last, truth and falsehood are often so intimately blended, that we find it impossible to distinguish them; and thus, undoubtedly, much valuable matter has been rendered useless. The advancement of medical knowledge, it is allowed, must depend upon a correct statement of facts; but facts cannot be correctly stated when they are viewed through the mists of prejudice, and made subservient to preconceived opinions, or brought to tally with the theory of some celebrated physician. "Oportet," says Haller, "absque prejudicio ad opus venire, non eo animo ut videas, quæ classicus auctor descripsit; sed ea cum voluntate, ut ea videas, quæ natura fecit."

Sauvages deprecates the unnatural alliance between experience and conjecture; a fault which in modern times has been carried to a great length. One writer, for instance, has attributed the formation of tuberculous masses to a species of "impregnation or infiltration" of the pulmonary tissue; and another tells us that they are the effects of chronic "irritation" of the lymphatic capillaries. When we place these statements in opposition to each other, we instantly detect their deceitfulness and illegitimacy; yet they are brought forward by men who pretend to have been patient and accurate in their researches.

In pursuing his object, the author tells us, he was compelled to notice the errors which lay in his path, and as he has done this with freedom, he trusts it has been done with perfect fairness. In the present work, he has restricted his illustrations entirely the to progress of tubercles; and he observes that, if the nature of tuberculous disorganizations be really such as it appears to be, we may hope to acquire such knowledge as shall guide us in this treatment, with more certainty and success than formerly. With the view of obtaining a more perfect knowledge of this subject, the author recommends comparative pathology to the attention of physicians; and he informs us that he has endeavoured to strengthen his statements by the testimony of adversaries; a kind of proof which he very justly considers as unexceptionable. We have thus given a brief abstract of the author's introduction, the principles of which we would recom-

mend to the attention of every man who means to write concisely and correctly upon medical subjects.

The details of the PROGRESS OF PULMONARY TUBERCLES, he has faithfully drawn from a comparison of the progress of disease in man, and in the inferior animals; for it is not, he observes, in hospitals and dissecting rooms, that we have the best opportunity of acquiring a knowledge of the progress of morbid changes; and those who have obtained all their medical instructions in such places, will scarcely allow, that the vast disorganizations we so often meet with, have arisen from the very small beginnings from which they actually take their rise. Hence, to the same object in its different forms, they assign a different name and a different origin. We give the propositions with which he sets out, and which are taken from his "Enquiry" in the author's own words.

"1. Then, I affirm, that tubercles exist in almost every texture of the body, and that their origin and essential character will probably be found to be the same wherever they are discovered. 2. That tubercles in their commencement, are small vesicular bodies (i. e. hydatids) with fluid contents. 3. That these bodies subsequently undergo transformations, on the nature of which their tuberculous character depends; that these transformations are progressive, but not uniform, and that it is only in the larger bodies of this kind, that they can be accurately traced. That they commence with an opake spot, which advances with different degrees of rapidity, and ultimately converts both the contained and containing parts, into substances very different from what they were at first. 4. That on the size and relative position and structure of the tubercles, which are thus formed, depend the characters of many of the most formidable disorganizations to which the human body is exposed. 5. That considering the transmutations which these bodies undergo, the condition in which they may be found will be modified by the time at which they may happen to be examined. 6. That it is rarely that we can have an opportunity of seeing the first steps of these morbid phenomena in the human subject, because the tubercles are generally formed, and the elementary character of course lost, before death permits us to make enquiries respecting altered or morbid structure. 7. That some tumours are formed by the aggregation of tubercles, and that the character of such bodies are materially influenced by the relative position and contents of the elementary parts, of which they may happen to have been composed, or in other words, that varieties in the arrangement of the elementary parts of morbid growths, will of course, cause corresponding varieties in their appearance. 8. That, therefore, diversity of appearance in tubercles or tumours, does not imply diversity of origin, for it has been demonstrated that substances and textures of very different properties, may be found even within the same cyst, thereby merely denoting different gradations in the changes to

which these bodies are liable. 9. That the disorganizations above referred to, are not the product of any species of inflammation; and that though inflammation may attend their growth, and modify the symptoms which they occasion, yet, that it is very different both in its origin and consequences, from that species which attacks a part unaltered by previous disease; that in the first instance, it is to be considered as the consequence, and in the latter, as the cause of altered texture".

No good whatever, as the author observes, has resulted from the classification of tubercles, as almost every individual writer has followed a classification of his own. Tubercles are generally evolved in great number, and in that case they seldom individually advance to a great size, but either approximate, or are in actual contact, their qualities varying according to the nature and period of their progress. When a small number are generated, they often attain a large size, and may produce either a vomica or a tumour, or both.

When tubercles are first formed in the lungs, they are merely visible on a close inspection, and being vesicular transparent bodies, they shine amidst the unchanged texture of the surrounding lung. They are sometimes seen clustering together on the surface of the membranes, like the beautiful globular incrustations which decorate the stalks and leaves of the ice plant. It is very rarely that they can be seen in this form in the human subject; and most of the descriptions given of them have been made at a later period of their progress. Then, when they are touched, a distinct granular sensation is communicated to the fingers. After this period their size increases, they become firmer, lose their transparency, and have the appearance of a yellow opake body. In this state they sometimes fall into ulceration and prove fatal. But before this happens, many of them advance farther; and, unless in contact with each other, they go on increasing in bulk. Some contain fluids of various colour and consistence; others appear to be almost solid bodies on dissection; the appearances in the lungs at this period are various, but they have been often described.

When tubercles are first developed in the lungs, or elsewhere, the surrounding texture seems to undergo little or no change; but as they increase in size and approximate, the system is sensibly disturbed. Respiration becomes quick and laborious on slight exertion, and the blood being impeded in its circulation, the lung becomes firmer and of a darker colour and exhibits the appearance which has been called *hepatization*. This occasionally may be obliterated, when the tubercles increase in size and colour, and every thing like pulmonary texture is effaced. To explain these changes the author has referred the reader to his

plates, which are well executed, and among these changes melanosis, or black induration of the lungs may be sometimes seen, which the French have treated as a distinct variety of pulmonary disease, as they do hepatization. Perhaps, with our author, we should consider it merely as a casual deviation from ordinary occurrences.

To enumerate the symptoms which indicate these changes of structure, would exceed our limits. We must therefore refer the reader to the work itself, and to the writings of Sauvages, Burserius, Portal, and our venerable preceptor Dr. Duncan, senior. However, the best description of these symptoms will be found in Burserius, de Phthisis pulmon. LXIII. and in Sauvages, Phthisis sicca, or in Laennec's more recent investigations. With our author, we may observe, that it is in that period of the progress of tubercles, which is intermediate to their developement and their consolidation, that all the symptoms characteristic of tubercular phthisis, occur; for when they are once consolidated, it is probable that they do not subsequently suppurate or ulcerate. When their destruction is once begun, the disease generally proves fatal; but there have been instances of recovery after the ulceration of several tubercles. The appearance of pus by no means necessarily indicates the presence of tubercles, for very often their contents are far from being purulent, and pus may be secreted from an inflamed or irritated membrane, without ulceration.

When the dark-coloured indurated state of the lung attends tubercles to any extent, the breathing is generally much more difficult, and there is often a livid appearance about the lips and countenance, which is not seen in other cases. The disease is also very serious, where tubercles exist simultaneously in the pleura and in the parenchyma of the lungs.

Tubercles, in their primary state, may sometimes be detected in the human subject, when an individual has been cut off by some other disease, before the tuberculous affection had run its course; and Dr. Baron has been fortunate enough to meet with such instances; of the appearances thus detected he has given a good representation in his plates.

Such is the process, which, according to Dr. Baron, nature has employed in the production and progress of tubercles, and it appears to be so conformable to the general simplicity of her works, that we are much inclined to believe it true. As in some degree favouring the author's statements, we subjoin a short account of a dissection which we made sixteen years ago. It is copied *verbatim* from our note book.

"The womb was about the size of a pigeon's egg. It had

hardly any cavity, and no passage to the vagina that would allow the entrance of a small probe. Its sides were nearly as hard as cartilage. The left ovarium was prodigiously enlarged and consisted of a great number of small bags firmly adhering together, and filled with a kind of reddish matter of the consistence of cream. In different parts adjoining this diseased mass, were two or three peritonæal sacs, containing each about an English pint of water. The intestines and other bowels were small in size, and were driven into the upper and back part of the abdomen. The liver was covered with small round white granulations." This woman was in her 25th year. She had complained about seven months before her death. She attributed the disease to her having sat up all night, about two years before, when her menses were flowing. The menses suddenly stopt at that time and never appeared again.

We do not see why this opinion of the author should have met with such keen opposition as we understand it has met with; surely our not having observed any thing of the kind in our dissections is not a sufficient reason for rejecting it. Nor can we think that any man, in the respectable situation of Dr. Baron, would palm fictitious dissections on the world. The theories already framed on this subject are so absurd, that we hail with pleasure what, in this case we had almost said, is not theory but fact.

In going on to the TUBERCULOUS DISEASES IN THE INFERIOR ANIMALS, he gives numerous extracts from the writings of M. Dupuy, a French veterinary surgeon, of whose work we formerly gave some account. *(Quart. Journ.* I. 104.*)* In dissections of the horse, cow, and sheep, hydatids and tubercles were found in the same structure, the hydatids apparently passing into the state of tubercles. Indeed this appearance so forcibly struck M. Dupuy, a believer in the old doctrine concerning tubercle, that he has expressed himself thus: "We thought proper to compare these two affections, the tubercular and the hydatidal, with each other, in the first place because we have found them associated in the same subjects and often in the same intestine; and secondly, because in the cyst which contained the hydatids, we found tuberculous matter just beginning to be deposited; a circumstance which would lead us to believe that the one may succeed the other." Yet he has stated elsewhere that tubercles, at their commencement, are hard firm bodies. No man, says the author, ever saw a hard tubercle deposited, and probably such a thing is impossible.

Another extract from Dupuy, proves, "that tubercles are the result of an anterior process of disorganization, and that the first

step in the process is the formation of small vesicular bodies with fluid contents, and that the different transmutations which they undergo are but the successive states of the same disease." From the same author we have still further coroboration of the subject, taken from the tuberculous diseases of sheep. Upon the whole he concludes that farcy bears the same relation to glanders in the horse that scrofula in the extremities does to tuberculous phthisis in man, which is, we think, somewhat probable.

In the third chapter, we have the opinions of some of the older writers. Hippocrates was well acquainted with tuberculous diseases of the lungs; and he had modes of detecting diseases of the chest, which are generally thought to be modern discoveries. He knew how to ascertain the presence of pus in the cavity of the thorax by agitating or shaking the chest, and at the same time applying the ear to it. We apprehend that Dr. Baron, notwithstanding his display of erudition, has not translated the Greek word properly by percussion; at least Prosper Alpinus, in his Medicina Methodica does not seem to have so understood it in the following passage. "Sæpe corpore commoto, seu e latere in latus verso, quasi sonus auditur, veluti inclusi atque collisi, fluctuantisque humoris." Perhaps by percussion, Dr. Baron means to indicate the effect of sound on the ear of the listener.

The testimony of Hippocrates, with regard to auscultation in cases of water in the chest is no less decisive. We know also the difference which subsists between pectoral diseases that have an inflammatory origin, and those that are the consequence of tubercles; and he distinctly specifies tubercles and peripneumony as causes which may produce a collection of purulent matter in the lungs: his prognosis in these cases is also very correct. With the existence of hydatids, our author says, Hippocrates was familiar, and that he points to the identity of tubercles and hydatids; but we have not observed that the father of medicine uses any other word to express them than *phyma*, growth or production, which he has made the fountain, both of pyon, pus, hyderus, and dropsy; and we apprehend that the passage which Dr. Baron has translated, *and many (hydatids?) tubercles have arisen in them, have suppurated,*—should be, *and many people have had suppuration of the lungs, when tubercles have been formed in them.* Neither the phyma (hydatid) of Hippocrates, nor his hyderus of the lungs seem to have been noticed by any subsequent author till the time of Duverney and Burserius. The latter has spoken largely on the subject, and had his work been less known we could have given many curious extracts from it. The case has been different with the tubercle. It must have been well known to Galen, though Dr. Baron says he has only ob-

securely referred to it. The reader will judge of this by the two following extracts which we give in English, our copy of that author, the Editio Princeps of Aldus, having no Latin translation. "If a person in health, and going about his usual busines, shall have begun to breathe with difficulty, and if this symptom go on increasing without any hoarseness in his breathing, we may look for the production of a crude tubercle." The other passage is as follows. "I have seen another such affection in the lungs. A certain person having been troubled for a long while with a cough and expectoration of viscid phlegm, at length coughed up something, like small tubercles (*chalazia*, tubercles which appear in swine's flesh,) which he brought and shewed to me; and again another of the same kind a few days after. As it appeared to me that the viscid humour formerly expectorated had become dry and put on that firm appearance, I gave him a medicine to drink which is good for asthma. Having drank this he actually spit up small tubercles *(chalazia)*, and for a longer time than formerly, and he continued to do so for many years, till he died. In size these tubercles were like the seeds called *orobi*, [small wild peas, ED.] for the most part, although some were larger and some less. I have had other patients, also, who spit the same kind of substances, and who lived many years, and others who died of the complaint, some of them being diseased in the respiratory organs. But not one of them spit blood."—(GALEN. *opera. edit. Princeps.*)

Of the older authors in modern times, we may mention, in addition to those of Dr. Baron, Forestus, and Riverius. The former has the following passage which is strikingly expressive of tubercle. "Latius prefecto et imprimis abditum vitium, sæpe nec laboranti nec medico notum, quo laborans ipse nec consueta munia intermittit, nec se morbo teneri putat, caussumque interitus sui nesciens inter gerit sub pectore." And, assuredly many more authors were acquainted with them in the last century, than Dr. Baron seems to be aware of; though none of them appear to have made so minute an examination of this structure as Dr. Sparks. In Schroeder's Dissertation de puris absque prægressa Inflammatione origine, Gottingen, 1766, we meet with the following sentence:—"Multa tuberculorum in pulmonibus repertorum, quibus tabes inducta fuit, occurrant exempla, quorum autem ea natura est, ut, licet duriorem materiam, cretaceam quasi seu gypsaceam initio contineant, sensim tamen in mollius liquidum, quin verum pus resolvantur; unde hecticæ in phthisin transitus cognoscitur." Here, indeed, we have the old theory of the softening of tubercles; yet the dissertation contains many curious remarks on tubercle, with reference to a paper of Dr. Andrew St. Clair's, in the Edinburgh

Medical Essays, to Barrere's anatomical observations, to Sydenham, Mead, and Pringle. Burserius, also, is very copious on this subject.

The author next gives us a number of quotations from Morgagni, which shew that he was acquainted with the tuberculated disease of the peritonæum, and that he was aware of a connection between tubercles and hydatids. For more examples of a similar kind, we are next referred to the works of Bonetus, De Haen, Bidloo, Wharton, &c. All the remarks already made, with regard to pulmonary tubercles, are equally applicable to those of the abdomen. It was not Bichat, but De Haen, who first noticed the tubercle of the peritonæum. It may be seen in one of the plates to Dr. Baillie's Morbid Anatomy.

In examining the opinions of modern writers, he begins with M. Bayle, who has been looked up to as a great authority on this subject, and shews that his definition of phthisis is faulty, as it embraces diseases in character very unlike pulmonary phthisis, and excludes from that disease every thing characteristic. Laennec's definition is more accordant to the views of Dr. Baron. "The existence of tubercles in the lungs," says Laennec, is the cause, and constitutes the essential anatomical character of pulmonary consumption." In M. Bayle's first species of phthisis, *phthisis tuberculeuse*, we have *encysted, non-encysted, and miliary tubercles*, and we are told that these various tubercles may exist in three different states, and that these again may be complicated in a variety of ways. This, we are told by Dr. Baron confirms the opinion he has been advocating, that diversity of opinion as to tubercles does not imply diversity of origin, but merely varieties in the transmutations of bodies, which were originally and fundamentally the same. From many parts of M. Laennec's work, it would appear that he has assigned a progress to the tubercular disease nearly similar to that of our author, but there is no little obscurity in some of his statements, and he has spoken of processes, as connected with tubercles, which are the very reverse of each other. In following M. Laennec's method of ratiocination, it would be necessary to give a different name, and to ascribe a different mode of formation to every variety of morbid appearance that may be met with in an animal body, which all analogy shews to be inconsistent with the general simplicity of nature. For his own views on this subject, whatever may be their fate, Dr. Baron may undoubtedly plead simplicity and consistency.

Great misconception, says our author, has arisen from considering the cyst of the tubercle as something different from the tubercle itself, when in reality it is essential to it. In some

cases, it is the cyst that is first changed, for it often becomes hard and almost cartilaginous, whilst its contents remain soft or curdy; but at other times the change begins in the centre, so that the cyst and its contents become completely amalgamated. It is doubtless, from not duly considering these circumstances, that tubercles have been divided into the encysted and not encysted. It is chiefly these tubercles whose coats are first thickened, that fall into suppuration; and hence, on dissection, those firm cartilaginous excavations, the remnants of tubercles, which have discharged their contents; a fact which was familiar to Hippocrates. And such is the origin of those unseemly clefts and fissures which are seen in what is vulgarly denominated an abscess of the lungs. Of these we have a good representation in the plates subjoined to the volume.

M. Laennec tells us, that hydatids and cysts have been for a long time confounded with each other; yet from several parts of his work, it may be proved that they are identically the same. However, while he is unnecessarily multiplying divisions, he does not seem to be aware of the conclusions, subversive of his opinion, which may be drawn from his own statements. The whole of this subject the author has examined with great acuteness; but, in the short compass of an abstract, we find it impossible to do justice to his remarks. What M. Laennec next writes about cartilaginous, osseous, calculous, and cretaceous productions of the lungs, may be all proved, as we are informed by Dr. Baron, to belong to tuberculous disorganization, and, indeed, to be a necessary part of it, notwithstanding that author's theory, that they are developed by a too prodigal effort of nature for the cure of tubercles.

Dr. Baron next considers M. Laennec's encephaloides du Poumon, which in this country has been inaccurately called fungus hæmatodes of the lungs. It presents, according to M. Laennec, three distinct periods in its developements, namely, that of its formation; that of its complete developement, in which its resemblance to the central tissue is most exact; and that of its softening. Here the order of events seems to be inverted. In the third state the matter is like thick pus; and this state Dr. Baron has ventured to call a vomica, as it corresponds with the best descriptions which authors have given of this disease; and even with that of M. Laennec himself, for he has made no other difference betwixt them than this, that the vomica bursts, whilst the encephaloid remains entire. M. Laennec has made a hasty assertion, that hydro-thorax is always an attendant on tubercles of the pleura; but this is denied by Dr. Baron, who affirms that they generally produce accretion.

Laennec, however, confesses that he has never seen such tubercles, but in a semi-transparent or in an opake state; and this says Dr. Baron, would always be the case in the lungs also, did not a variety of circumstances, to which other parts of the body are not exposed, make them fall into a state of ulceration.

According to Dr. Baron, the physiology of tubercles adopted by M. Broussais, is nothing but an overwhelming profusion of error, delivered in language which is nearly unintelligible. In examining the remarks of Dr. Abercrombie, of Edinburgh, Dr. Baron declares, that he has been quite unable to extract any thing from them like a precise meaning. Instead of practical detail, we have, he says, an immature hypothesis, and a history of disorganizations which little correspond with nature. He divides the "morbid condition" of the lungs into five heads; the white tubercle, the semi-transparent tubercle, the fleshy tubercle, the black degeneration of the lungs, and the simple hepatized induration of the lungs. In this way the varieties might have been much multiplied. From what we have already said, it is evident, that Dr. Abercrombie's arrangement is more involved than even that of Laennec. Dr. Abercrombie seems to imagine that his white tubercle and his fleshy tubercle, like the crude tubercle of Laennec, are, by some unaccountable process, deposited in their solid state in the lungs. But he admits that tubercles are found in a semi-transparent state; and this gives countenance to Dr. Baron's assertions respecting the transmutation of these bodies. As he allows, also, that these semi-transparent tubercles may, in some cases, become opake, one would naturally think that the semi transparent tubercle should have constituted his first species; but this would have been fatal to the notions he had formed concerning the primary state of tuberculous disorganization. His fourth and fifth species, melanosis and hepatization, are often the result of a very different disease from tubercular phthisis, although, unquestionably, they may exist along with it. But why should we follow our author through all his examination of Dr. Abercrombie? Suffice it to say, that he has shewn that gentleman's opinions on this subject, to be untenable, and indeed to be at variance with each other.

On the organic diseases of the brain, in our author's opinion, Dr. Abercrombie is equally incorrect. First, these diseases are represented as the result of chronic inflammation; next we find them advancing without any symptoms of chronic inflammation, and again we are told that chronic inflammation, which is assumed as the cause of these diseases, does not take place, till they are proceeding to a fatal termination at which time it is excited by that very cause, which itself is said to have

produced. Such are nearly the very words of Dr. Baron. When at this day such absurdity is found in the pages, even of a meritorious author, what are we to think of the present state of medical reasoning? The above passage, indeed, is more like the nonsense of the romance writer, so much admired by Don Quixote in the first chapter of his history, than the correct language of a physician. But we have no pleasure in following the author as he traces Dr. A. through all the mazes of his opinions. We think it better to refer the reader to the work itself, where he will find cases, which still further elucidates the idea of our author, that structural diseases have a similar origin and progress in every various texture and organ of the body. Towards the conclusion of the chapter, the author observes that his opinion on the subject of tubercles have been sanctioned by Mr. Charles Bell, in a paper on Carcinoma Mammæ hydatidis. He then concludes with a curious description of the tubercular transformation of muscle into a gelatinous substance, and where the tubercles were seen in all their stages. We also have witnessed the same morbid changes in the limbs of a dog whose lungs were diseased in many places. The animal had become diseased by being shut up every night for many months in a damp cellar.

We now proceed to the more important subject, the TREATMENT OF TUBERCULOUS DISEASES. In man, as well as in the inferior animals, tuberculous diseases may be generated by cold, moisture and bad food. By unsuitable nourishment, the disease may be readily induced in rabbits; and a wet season and bad pasture will induce it to a much greater extent in sheep and other animals. It is, also, ascertained that the disease, when it has not gone too far, may be removed by a more wholesome diet and by the abstraction of other predisposing causes. In no disease do we more frequently observe the effect of hereditary taint than in pulmonary tubercles; this, also, should be attended to.

The powers of the system, in the removal of morbid growths, may probably be excited to a much greater extent than is commonly imagined. It is in the infancy only of such diseases, that the powers, capable of removing the changes that have taken place, can exert themselves with due effect; and to that early period all our attention must be directed; and fortunately, even then, many of the symptoms are very easily detected. The first cough of an individual, who is about to fall into tubercular phthisis is often a sure mark of advanced disorganization. This state we should endeavour to remedy as soon as possible; and for this purpose we must try, by every means in our power,

to invigorate the constitution. If a change of structure has actually taken place, we must try to alter it by absorption, or, at any rate, prevent its increase. Formerly the most powerful deobstruents were mercury and alkaline preparations. In diseases of the lungs the use of mercury is questionable. But if we have any remedy that is capable of counteracting a scrophulous disposition of the external parts, it is allowable to conclude, that it may be useful in internal diseases of the same nature. Dr. Baron then informs us, that he knows no medicine which possesses such powers, in promoting the absorption of morbid growths, as the hydriodate of potass; the remedy which Dr. Coindet, of Genoa, has found so efficacious in the cure of bronchocele. Dr. Baron gives some cases to illustrate its efficacy in removing tuberculous disease. A woman affected with what he calls physconia hydatidosa, which had swelled the abdomen to a great size, began with eight drops of the hydriodate of potass in solution, twice a day, and continued it very regularly for nearly six months, when a very striking absorption of the diseased structure had taken place. Except laxatives and the occasional application of leeches, no other remedy had been employed. In another woman, who had a tumour of the size of a child's head in the left side of the abdomen, and which was attended with great pain, the author first applied leeches and hemlock fomentations to the seat of pain, and then directed an ointment containing hydriodate of potass to be rubbed on the swelling night and morning. At the same time Brandish's caustic alkali was administered internally. In four weeks the pain and tenderness were quite removed and the tumour reduced to one half of its original size. In this case the caustic alkali may have assisted the hydriodate. In another case, that of a gentleman, who had a series of tumours, reaching from the angle of the jaw to the top of the shoulder, some of them as large as a goose's egg, the hydriodate was administered for a few months in the dose of ten drops twice a day; and with the effect of almost entirely removing the tumours. We have next the case of a young gentleman, who had the most decided symptoms of tubercles in the lungs. He was kept in a regulated temperature, had his chest occasionally stimulated with blisters and tartar emetic ointment, and was confined to a strictly vegetable diet. He took anodynes for the cough, and had Brandish's caustic alkali given to him twice a day in a little compound infusion of orange peel. When these remedies had been employed for some weeks, he began to take eight drops of the hydriodate of potass in solution twice a day and continued it for three weeks without intermission. It was then left off for a

time, and occasionally resumed in the dose of ten or twelve drops. The consequence has been an almost complete recovery of his health. In the case of a woman, also, who had almost all the symptoms which characterize tuberculated accretions of the peritonæum, the author used this remedy with decided benefit. In cases, however, of tuberculous phthisis, where extensive ulceration was already present, it was, as he expected, of no avail; the period for affording effectual relief being then past.

SIR A. CRICHTON ON PULMONARY CONSUMPTION AND TAR VAPOUR.*

OBSCURITY and inelegance of style, seem to be the failings of many of our English writers, who have been long in Russia. Is it that the elegance of the Russ (which according to a late writer was the mother tongue of Æneas, Romulus, and Numa), renders men insensible to that of every other language? We cannot think so. If a man's ideas are not naturally confused, he ought to be able to express them in every language with which he is acquainted. Did Gibbon write unintelligibly in French, or Voltaire in English? No foreigner, however, could well be sixteen years in Russia, and become physician to the Autocrat of the North, without merit, and on that account we shall minutely, and we hope candidly, scrutinize the work of the good old knight of the red eagle now before us, though it be somewhat confused and obscure.

Sir Alexander Crichton writes, principally, to recommend the tar vapour in phthisis; but at the same time he has favoured us with his opinion of many other remedies employed in that disease. With regard to tar vapour, he observes, that if only one in twenty phthisical patients in Britain be saved by its use, he should be acquitted of presumption in recommending it. Even in tubercular phthisis, he thinks it beneficial, as when in combination with a regulated temperature, he has had proofs of its efficacy, even when Laennec's *stethoscope* (chest examiner) had certified the presence of *pectoriloquism*, (the sound denoting a præternatural cavity in the chest.) Even when a great part

* Practical Observations on the Treatment and Cure of several varieties of Pulmonary Consumption; and on the effects of the Vapour of Boiling Tar in that Disease. By Sir Alexander Crichton, M.D. F.R.S., &c. &c. pp. 261, 8vo. London, 1823.

of the lungs had been destroyed by vomicæ, and the patient was nearly in the last stage of phthisis, Sir Alexander has known a complete cure effected by the use of tar vapour. However, in some cases, the disorganization stops of itself, or the disease is cured by a peculiar diet and regimen, or by the accidental use of some remedy. Many believe that it is the *phthisis pituitosa* of the Germans only, which is curable by tar vapour; but in most of the cases at St. Petersburgh and Berlin, which were considered as hopeless, there were indubitable symptoms of tuberculous disorganization, and frequently scrofulous diathesis. Many though in a regulated temperature, were getting worse previously to the use of tar vapour; so that the cure cannot be ascribed to temperature.

Speaking of the climate best adapted for phthisis, Sir A. condemns the practice of sending consumptive patients to the South of France, the North of Italy, Naples, and Cintra in Portugal, and making them undertake sea voyages at improper seasons, or ordering them from the country to the sea-side. Consumption, he observes, is infinitely more frequent in Great Britain and Ireland than in Russia; and this immunity of the latter country is owing, not by any means to a warmer or finer climate or to a better diet, but to the sheep-skin clothing of the natives and to the closeness of their houses; and it is not among the common people, but the nobility, o those who have adopted the dress and manners of Westerr. Europe, that consumption has become prevalent. The lungs in Russia are alone exposed to the cold, but by warm clothing, the circulation on the surface and in the extremities is so equable, that they suffer no injury from it. In Lapland, also, as we are informed by Linnæus, consumption is extremely rare. The best preservation, therefore, against pulmonary consumption is warmth, or whatever keeps an equal balance of circulation on the surface. Blood driven from the surface suddenly on the lungs, in Sir A.'s opinion, favours congestion in their capillaries, and by this means is apt to produce tubercle and its consequent inflammation. He observes, that the less air a consumptive patient takes into his lungs, and the less motion he gives them, the better; but this often depends on the action of the heart, which it is not always in the patient's power to regulate; hence those remedies are beneficial which allay the irritability of the heart and arteries, provided they do not injure the vitality of the patient. On this account, hydrocyanic acid, opium, henbane, fox-glove, the tepid bath, moderate doses of tartar emetic, and calomel, have been employed.

In the scrofulous diathesis, according to Sir Alexander, the vascular system, particularly the lacteal and absorbent parts of it,

are comparatively weak; and its absorbents are much more easily torn by injected fluids, than those of a healthy subject. Hence, says he, we may explain the phenomena without supposing any general acrimony of the fluids, of which there is no proof. The effects of such defective organization, therefore, must be a more languid circulation and congestions in particular parts. In Russia the effects of scrofula are dreadful, but it generally makes its attacks on the external glands, or on the face, eyes, throat, and bones of the extremities, and its frequency and virulence depend in a great measure on the diet of the inhabitants. When a child of a weakly constitution begins to lose its appetite and to be affected with langour, when its features have shrunk, and when its eyes have become heavy and deprived of their usual lustre, scrofulous action is going forward, or at least rapidly forming. Such a state will be most effectually counteracted by whatever renders the circulation free in the capillaries of the surface, or removes congestion from the internal parts, and by freeing the intestines from every accumulation which may impede the action of the abdominal vessels, or particularly occasion pressure in the lacteals. For this purpose, the daily use of a salt-water bath from 92° to 96° of Fahrenheit, stimulants which produce a permanently increased action on the vessels of the skin, and the preparations of antimony, and submuriate of mercury, with the alkalies, sarsaparilla, and arnica montana are recommended. For removing scrofulous depositions, Sir A. has found no remedy more effectual than the common blue oxide of mercury with antimony, in combination with the pil. galban. comp. and a strong decoction of sarsaparilla. In the treatment of incipient scrofula, and indeed of many obstinate chronic disorders, he has found no remedy more beneficial than mercury, particularly well prepared calomel; but the constant experience of thirty-four years, has proved to him that it did best in very minute doses. In climates of moderate temperature, Sir A. never found it necessary to give more than from five to eight grains of calomel, as a purgative in croup, scarlatina, or threatening hydrocephalus; and in chronic diseases or threatening disorganization, he found the third of a grain sufficient, given twice or thrice a day, till the gums were slightly affected. However, in scrofula, attended with much debility, he never induces mercurial action; but in such a case, he finds mercury given as an alterative, and alternated with mild tonics, of great service.

We must now say something of TAR VAPOUR. The author wishes it to be considered as an auxiliary only to the general treatment, which the varieties of phthisis, and the constitutions of individuals may demand. Most of those persons, who have re-

commended vapours of any kind, have employed them so indiscriminately that they have been called enthusiasts. Galen recommended the inhalation of the fumes of arsenic; and others have recommended aromatics in a dry or liquid state. Billard, a French author, was the first who recommended the vapour rising from equal parts of yellow wax and resin melted together, with the occasional addition of Peruvian and Canadian balsam. But most of these things, fell into disuse, from the physician or attendants becoming tired of their minutia; and on that account it is only in hospitals that a fair trial can be given to them. On this subject, Sir A. says, no one had published before himself; but Mr. Mudge had conjectured that the benefit arising from sea voyages might be owing to the effluvia of tar. However, a foreign physician residing at Portsea, a Dr. Lazaretto, has assumed the entire merit to himself, though his pamphlet appeared a year after that of Sir Alexander Crichton.

The author laments to find that it has been unsuccessful in Great Britain; and this, he has no doubt, depends on the want of due precaution, and on the openness of the houses, a circumstance, which he did not sufficiently attend to, when he published his pamphlet. Besides, it has been used in improper cases, particularly in hæmoptoe, a thing which he had expressly forbidden; but many physicians had the imprudence to use it without ever having read his pamphlet. This has been occasioned in a great measure by the indolence of mankind, who catch eagerly at a specific, as that which will save them trouble, or the medicine may have been given in desperate cases, merely to gratify the patient. But is it fair, in this case, to blame the remedy or the physician who recommended it? The vapour has been used also, in a concentrated state, in acute tubercular inflammation of the lungs, when it could not fail to do harm; and patients have been directed to inhale it from a bag or gazometer, at which time it always proves injurious from its heat and concentration to ulcerated lungs. At the Charitè of Berlin, when used properly, it has been nearly as successful as at St. Petersburgh; one in twelve of decidedly consumptive cases being cured, and one in five much relieved by it. It cannot be recommended with any certainty of benefit, when there is a hard and rather quick pulse accompanying the other usual symptoms of tubercular phthisis; and it can do no good where the scrofulous disposition is general and affects the viscera of the abdomen as well as those of the chest. Sir A. met with one consumptive patient, who could not bear the smell of tar, even in its natural state, being seized with syncope, whenever it was brought into the apartment. But other vapours may be substituted for it; as

those of the balsams, and resins. A spurious work of Galen, has recommended the vapour of burnt sponge, than which no smell can be more repugnant, or more likely to do harm.

The tar best adapted for consumption is that used in the navy, and in cable manufactories. It should be as liquid as possible; for if it is too thick an irritating vapour will rise from it when exposed to heat; indeed, impure tar is soon discovered by its disagreeable odour. As it comes to market, it is generally more or less contaminated with pyroligneous acid; but this may be removed by boiling an ounce or two of subcarbonate of potash with every pound of the tar for a few minutes, before bringing it into the patient's apartment; and when there, it should boil with the lowest possible heat, to prevent the disengagement of a white smoke which will produce violent coughing. In private practice two adjoining apartments should be impregnated with the vapour, so that ventilation may at all times be employed when necessary. But in the open rooms of Britain, it is almost impossible to charge any one of them with vapour; whereas, in the Russian houses nothing is more easy. The simplest way of doing this is to put a pint or more of prepared tar into any flat dish of iron, copper, or earthen ware, and then to place it on a stand, about a foot from the floor with a lamp under it. The tar at first must not be placed too near the patient. In very dry weather it is useful to have a basin of wet sand in the apartment to supply moisture. In mild weather patients may visit pitch-houses, and remain there till giddiness or violent headache oblige them to retire; and if they are nigh such establishments, they may repeat their visits several times a day. It is in such places only that the air is fully impregnated with the finer parts of the tar, which can but rarely be diffused in the small dimensions of an apartment. The temperature of the rooms, where the patient is exposed to the vapour, should be mild and equable, his diet should be plain and nourishing, and he should have plenty of mucilaginous decoction and occasional opiates. The vapour should be immediately desisted from, if it induce pain, difficulty of breathing, and a lessening of expectoration, without any abatement of the cough. In hospitals, too many phthisical patients should not be confined to one room, otherwise the air will be polluted by volatilized pus, and other animal matters. The author strongly recommends the creation of public establishments for the treatment of phthisis, not only for the purpose of trying tar vapour, but all the other remedies that have been at any time prescribed.

His theory of the vapour's action is not very intelligible, but he thinks it *hastens the softening or resolution of tubercles;* and

he imagines that it diminishes the quantity of oxygen in any given quantity of air. This is mere supposition.

We shall now follow the author, as he is making his remarks on various pulmonary complaints, and shall endeavour to select any thing useful that may meet us in our way. He very justly observes that, the phthisis which arises from tubercles, or *scrofulous secretions* and *depositions* in the lungs, is the next prevalent in this and in similar climates; but this simple observation he has complicated with an hypothesis, which he does not seem to put much faith in, as he thinks it very possible that tubercles may be diseased glands, at first invisible, but afterwards enlarged by disease. Here, we fancy, there is a kind of leaning to the opinion of Dr. Baron, but most of his notions about tubercles, seem to have been imbibed from the writings of Laennec, and of course it is not requisite that we should particularize them. From some cases that have fallen in his way, he is inclined to think that tubercles, when not numerous, may be altogether absorbed, and the patient restored to pretty good health; this state being, we apprehend, what Dr. Baron calls consolidation of the tubercles. We are told by Sir A. that tubercles are forming in the lungs, when the following circumstances are present: rapid emaciation and loss of strength, a frequent dry cough, difficulty of breathing on taking exercise, especially in going up an ascent, flying pains in the chest, or a fixed, though moderate pain in either or both sides of the chest, a shrinking of the features, and a scrofulous diathesis, and when they are fairly formed, we may observe, he tells us, an increase of cough, or expectoration of a curd-like mucus, or of a puriform matter tinged with blood, a still more rapid decay of vigour, and frequently symptomatic fever. When this kind of phthisis, he remarks, is attended with much fever, and strong inflammatory action in the lungs, it very quickly proves fatal, unless we are able to subdue that action; on the other hand, in its chronic form, it may continue for years, the tubercles slowly forming, and gradually discharging their contents. But in all this, there is nothing new, the first kind being evidently the galloping consumption of the vulgar.

The CURE OF TUBERCLES, according to our author, is most easily effected before they have become too numerous; but he thinks that, if a stop can be put to their increase, the cure will go on best at the period of their softening. This opinion must be given in allusion to the tar vapour, which is supposed to be employed then with the most benefit. But it appears to us that, all our author's notions about tubercles, are vague and contra-

dictory, and destitute of that *lucidus ordo*, so conspicuous in the work of Dr. Baron.

In the cure of chronic tubercular phthisis, Sir A. employs every known means for correcting a scrofulous diathesis; he confines his patient, for months, to his apartments, both in winter and summer, and makes him breathe gently, but constantly, a moist tar vapour atmosphere, while the temperature, at the same time, is exactly regulated. He makes him take exercise twice or thrice a day in the open air, in summer, when the weather is very calm and warm. He forbids the use of tea, coffee, and acid drinks; but he allows his patient to take good beef or mutton soup to breakfast, or cocoa, milk, or chocolate, and to dinner, soup or boiled or roasted meat in moderate quantity. The medicines he uses to promote the resolution and discharge of tubercular matter, are those already mentioned as useful in scrofula, to which he adds hemlock and Iceland moss, and what produce effects chiefly on the absorbent and lymphatic vessels, such as the seeds of the Phellandrium aquaticum, at present so much invogue in Germany. The phellandrium is said to have great power in the cure of obstinate ulcers, and to be very beneficial in pulmonary affections. Its seeds have an aromatic and rather acrid taste, and they may be exhibited in substance, from the dose of a scruple to that of a drachm, twice or thrice a day. When the pulse is uniformly quick, and rather hard, or when the cough is frequent, and the expectoration scanty and difficult, these seeds, in Sir A's opinion, are injurious; but in chronic tubercular phthisis; in phthisis pituitosa; and in chronic bronchitis they are serviceable. In short, they act very much like the seneka root. As we have already said, the tar vapour is inadmissible in the acute tubercular phthisis; and the use of all stimulating and tonic remedies, although they are frequently given from the idea too generally entertained, that the quick pulse of that kind of phthisis is merely occasioned by debility. "Here, the cure" says Sir A. "must be anti-febrile and anti-scrofulous, and not merely anti-catarrhal." To subdue tubercular inflammation, he has great confidence in the red sulphuret of mercury, combined with a very small proportion of tartrate of antimony, or the pulvis antimonialis. When the tubercles give much pain, he has derived benefit from the hydrocyanic acid, but upon the whole, he thinks, that it is a very uncertain and unsatisfactory medicine. In advanced phthisis, whether acute or chronic, it is inadmissible, from its impeding expectoration, and increasing dyspnœa, and general uneasiness. He employs myrrh and galbanum, when nature, as he imagines, is not active enough in *resolving* or *softening* tubercles. We should, how-

ever, use every means in our power, to prevent the increase of tubercles; and this may be done by means of blisters, issues, and setons on the external surface of the chest; or we may form pustules on the skin, by applying tartar emetic ointment. We agree with Sir A. in thinking that this last remedy often, to all appearance, gives a favourable bias to the complaint; at least, so we have thought, in some cases; but the fearful look of the eruption, so near their bosoms, seems to give no little terror to young ladies. Sir A. has often made large issues, with the hope of great benefit, but he has generally been much disappointed; indeed, it was only in the very earliest period of tubercular phthisis, that they ever appeared to do any good. When they are beneficial, the appetite increases, the pains vanish, the cough abates, the expectoration is lessened, the breathing becomes easier, and the patient gains strength and spirits. But when the tubercles are softening, and when they are not too numerous, very great benefit is produced, if the patient is made to breathe the vapour of boiling tar; but often neither this, nor other remedies, shew their good effects, till they have been used for some weeks; but even, although the cough should be a little increased, on the first application of the vapour, we should not desist from its use. Palliatives, in the mean time, are always necessary, and these are generally sought for among the narcotics; and Sir A. has often found a combination of these answer better than any one of them separately. Emetics have been much praised; but in the commencement of tubercular phthisis, when there is a little or no expectoration, they generally do harm; and when the complaint is far advanced, they are prejudicial, by exhausting very rapidly the vitality of the patient. When an emetic is given, it should be in a full dose, so as to produce immediate vomiting. When the hectic fever is fairly established, that is, when phthisis is in its most exquisite form, it is needless to employ any other than palliative remedies. Even in this state, however, the tar fumigation often produces the happiest changes. The kind and quantity of exercise must be determined by the strength of the patient; and it should be begun about half an hour before the accession of the fever. During its hot stage, water, impregnated fully with carbonic acid, to which a little light wine may be added, should be drunk frequently, but in small quantities at a time. Sir A. reprobates the use of steel and myrrh in the last stage of phthisis; indeed, he thinks steel a very injurious article in every stage of tubercular phthisis; but he allows that it does good in pituitous phthisis. From bark, as a tonic, he never perceived that the patient derived benefit; but he never gave it in larger doses, every four

hours, as recommended by Morton. In the commencement of chronic tubercular phthisis, we think it has done good; at the end, never. To have a good effect, however, it must be given in very large doses. The tonics which Sir A. has employed with most success, are the Iceland moss, the watery extract of myrrh, and as much nourishing food as the patient can well bear. He suspects that the cases in which Dr. Griffith succeeded with myrrh and steel, were those spurious hectics which occasionally accompany amenorrhœa; and he thinks it was atonic bronchitis, in which Morton found cinchona beneficial. In the *hot* stage, in very *hot* weather, or in a *hot* apartment, he thinks that the patient, in some cases, may be sponged with cold vinegar and water. We imagine that Sir A. speaks very much at random on sponging, when he requires so many *hot* things during its application.

The author is very eloquent on the subject of milk, quoting, in its favour, the authority of the most respectable physicians of ancient and modern times. He speaks highly of it himself, and says that when it agrees with the patient, it should be combined with no other article of food, except farinaceous grain, or amylaceous substances, for, if joined with animal food, the mixture is apt to occasion a vitiated secretion of bile. Here Sir A. very properly condemns the practice of making a healthy young woman give suck to a consumptive patient; a practice which he has found very agreeable to the physicians of Germany. Some very remarkable cases are mentioned, as having occurred from the use of milk, combined with a fresh animal fat, especially the fat of mutton. Among the vegetable articles that may be mixed with milk, he hesitates to include potatoes, from the idea that, their natural juice is poisonous; yet, horses and other animals eat them with this juice, very constantly in winter, and live.

Should any symptoms of syphilis appear, mercury must be employed, and the ointment in preference to all its other preparations; nor does phthisis contra-indicate the use of mercury, the disease having been occasionally cured by mercurial action; during the course, the tar vapour, and the internal medicines may be continued.

Such are the most material of Sir A's remarks on tubercular phthisis. We may add to them that, he disapproves highly of rearing children, who have a tendency to tubercular phthisis, too hardily, that is, by exposing them to all kinds of weather, and plunging them daily in a cold bath.

Hæmoptysis, as we all know, may produce sudden death, or a complete recovery may ensue, or it may end in one of the worst kinds of purulent phthisis. It sometimes rises from numerous tubercles impeding the pulmonary circulation, and

throwing too much blood on some particular part of the lungs; and the evil will be aggravated, if, at the same time, there is mal-conformation of the chest. We think it needless to mention, as Sir A. has done, the preceding and concomitant symptoms of hæmoptysis, but we may observe that, one of its frequent causes, a narrow and contracted chest, may be enlarged, if means are employed for that purpose, before growth is completed. The most common means is, to make the patient place his hands upon some solid substance, and frequently draw deep inspirations; yet it must not be carried so far as to occasion pain. The frequent exercise of the arms is also useful; and so is almost every kind of moderate exercise. But, above all things, Sir A. thinks that warm clothing is necessary in mal-conformation of the chest.

The cure of pulmonary hæmorrhage is well known; but it may not be amiss to make some remarks on that subject. The first class of patients should either be put in warm water or wrapped up in some warm dress; but the head, neck, and chest, may be exposed to cold air. The hands, also, should be kept warm. When the circulation is free in the extremities, venesection may be performed. Next, Sir A. applies a blister to the sternum, and another to the back; and instead of astringents, he gives nitre and sulphate of magnesia combined, every two hours, till one or two loose stools are procured. After these, he trusts very much to emollient drinks and saline medicines. If bleeding is carried too far, there is danger of asphyxia; or should that not happen, the power of absorption will be much weakened. In cases where hæmoptysis has returned frequently, the exhibition of small doses of pulv. ipec. comp. seems to have done much good; but where effusion has been extensive in the parenchyma of the lungs, it should not be administered till heat and febrile action are subdued. Of course, laxatives must be given occasionally during its use. In a weakly constitution the Iceland moss is often necessary as a tonic. No medicine will excite the absorbents better than mercury and ipecacuanha. Squills, Sir A. thinks, are always improper in hæmoptysis; he has known even ipecacuanha hurtful. A milk diet, or at least some very light food, is necessary. The patient, as much as possible, should be in an erect posture; he should keep the most perfect silence; and indeed, every irritation connected with the lungs should be avoided.

We next follow the author to peripneumony and its consequences. The fur dress of the Russian renders him little susceptible of this complaint; but it is not unfrequent among the soldiery and certain votaries of fashion. When this disease ter-

minates in suppuration, Sir A. says that, the matter is often combined in an ulcerated cavity; but, from Laennec's dissections, it would appear, that it is more commonly diffused through the parenchyma of the lungs. When consumption follows this suppuration, it finishes its course much more rapidly than tubercular phthisis; and in this case, mercurial and antimonial medicines are inadmissible. The treatment, which is made much more difficult, too, when the peripneumonic abscess is complicated with hepatitis; and the same cause may excite both diseases. Unless the hepatic affection is very slight, we can have no hope whatever of a cure.

In the cure of phthisis from peripneumnoy, narcotics, and particularly opium, are often serviceable if they are employed in a moderate dose. In such cases the cough is an effort of nature to relieve the lungs; and a narcotic, given in a large dose, by producing an accumulation of pus, would in most instances occasion indescribable anxiety and oppression. In a nervous habit, narcotics may be given with much more freedom; however, the most useful of all remedies, in this case, is an atmosphere impregnated with the tar vapour. After the bursting of the abscess, emetics often do much good, by assisting the evacuations of pus, or promoting its absorption; but if, instead of lessening the cough and symptomatic fever, they increase perspiration or diminish appetite, we should relinquish them entirely. The tar vapour at first must be employed in a very diluted state; and indeed, should not be employed at all, till the atonic stage of the disease is fairly established. If it occasion pain or tightness of breathing or a dry cough, it must be omitted for a few hours, but, unless there be some remains of inflammation, such a thing seldom happens. In case of pain or increase of cough, or suppression of expectoration, Sir A. advises that the vapour of a decoction of aniseeds, marshmallow flowers, and poppy heads should be inhaled by the patient; and on the expectoration being restored, he recommends the employment of the tar vapour. It is in this variety of phthisis, he says, that Iceland moss, seneka, cinchona, myrrh, galbanum, sulphate of zinc, and acetate of lead appear to do most good. At first, they should be given in moderate doses. On all these remedies, Sir A. makes some practical remarks, which our limits will not allow us to particularize. Exercise, he highly recommends; and he thinks it is in this variety of phthisis, that a sea voyage does the most good. In the combination of peripneumonic phthisis with hepatitis, leeches or cupping, blisters, and mild mercurials are the chief remedies in the early stage, and mercurial frictions, the blue pill, taraxacum, chelidonium and tartrate of antimony, in

minute doses are, to be employed in the second or atonic period. The author here informs us, that chelidonium majus is possessed of undoubted efficacy in atony of the liver; and he regrets that it has been rejected by the London and Edinburgh Colleges.

Sir A. having now entered on the subject of bronchitis, observes that he has known only three cases of it which gave birth to cynanche polyposa. The phthisis pituitosa of the Germans, and the peripneumonia notha of Sydenham, are the same disease, which, though often confounded with catarrh, is in reality chronic bronchitis. After giving a very exact enumeration of the chief symptoms of the complaint, Sir A. tells us that its characteristic features are, a constant cough, a purulent-like expectoration, a quick pulse, emaciation, and at length hectic fever. The patient's sweats are partial and irregular. The expectoration is thinner than it is in catarrh, and is coughed up without pain and in larger quantity; and in general a full inspiration can be made without pain or irritation. After a time the disease assumes every character of pulmonary consumption; but notwithstanding the appearance of the matter in many cases, there is no ulceration; but, whether it be pus or mucus, no change of treatment is requisite for the disease. We next have those symptoms enumerated, which indicate a complication of chronic bronchitis with diseased liver; and he observes, that in Britain this complication is most frequently met with in the lower orders of society. If the patient has been exposed to cold, the disappearance of erysipelas or any cutaneous eruption, attended with a serous discharge, or the healing of an old ulcer, may occasion an attack of chronic bronchitis. A cold solution of acetate of lead, or even of oxymuriate of mercury, applied for a long time to parts of the body affected with a serous eruption, may produce it. The sudden suppression of the catamenia, the translation of rheumatic and gouty inflammation to the lungs, and the peculiarity of constitution, induced by common fever and scarlatina, are frequent sources of the disease. The most fatal kind of it is that which attacks dram-drinkers.

When chronic bronchitis is unconnected with tubercles or with ulceration of the lungs, as a consequence of peripneumony, it is in general curable: the chief remedies are the vapour of heated tar, emetics, tonics, blisters, and, indeed, most of those remedies which we have mentioned as beneficial in the consumption which follows peripneumony. Yet the disease does not always admit of tonics or pectoral stimulants; and the practitioner should on no account use them, if there should be an increase of cough, and the supervening of pain or tightness in the chest. Sir A.

has found the acetate of lead beneficial when joined with opium, in cases where the expectoration was very great; but during its use he gave castor oil every third or fourth morning.

Sir A. enters at some length on the treatment of measles, advising a constant warm moisture to be kept on the skin by means of tepid aqueous and mucilaginous drinks, during the eruptive fever; but though the temperature of the patient's apartment should be equally warm, he must on no account be loaded with bed-clothes. But all this, we presume is well known to the generality of practitioners; we shall, therefore, only mention that he disapproves highly of giving Dover's powder, or antimonials to bring out moisture on the skin. When bronchitis follows measles, it requires all those remedies which we have already enumerated.

In that dangerous disorder, laryngeal phthisis, of which we have an accurate description, the author has found the tar vapour of singular service; with the external application of blisters. His internal remedies are Iceland moss, and the balsams of Tolu and capivi, and sulphur at bed time.

Sir A. towards the end of the volume, has favoured us with some remarks on the hereditary disposition to pulmonary consumption, and on its contagious nature in certain circumstances; but they are not new. At the end of the book we have a great number of very good formulæ; but with regard to medicine he had previously made the following remark. "Modern Pharmacopœia's are shorn so much of old and approved receipts, on account of their being extraordinary compounds, as to be almost quite useless in some cases!"

We have thus given some account of a work, which, although it afford no great specimen of literary talent, we believe to be a faithful record of the author's practice; and we can conscientiously recommend it to the younger members of the profession as a useful sketch of the disease of which it treats. The style is not elegant, but it is sufficiently intelligible.

DR. COOKE ON HISTORY AND CURE OF EPILEPSY*.

The judgment which Dr. Cooke has shewn in the selection of the plan on which his Treatise on Nervous Diseases was constructed, and the ability of the execution of those parts

* History and Method of Cure of the various species of Epilepsy; being the second part of the second volume of a treatise on Nervous Diseases. By John Cooke, M. D. F. R. S. &c. &c. 8vo. pp. 235—. London. 1823.

which have already appeared, must naturally render the profession anxious to receive some estimate of the value and nature of the portion now before us. If it should suffer by a comparison with those which have preceded it, we feel convinced that the circumstance should be attributed, not to any want of research or information on the part of the author, which has been extensive and judicious but to the true cause, the difficulties and obscurities with which the subject is surrounded.

Ignorant as we are, (and the experience of every day serves to impress the fact more strongly upon our minds), of the true pathology of nervous diseases, this remark is still more strikingly applicable to epilepsy. Although its symptoms have been distinguished and accurately described from the earliest periods of medicine, yet during the long interval which has since elapsed, an examination of all that has been said upon the subject will convince us, that in our knowledge of its nature and causes we have made but inconsiderable advances, whilst in the treatment, our conduct has not been regulated by any fixed principles, but often influenced by the dictations of caprice or ill-digested hypothesis.

Definition and history of Epilepsy.—Dr. Cooke proposes to define epilepsy, as a disease consisting of paroxysms of convulsion, returning at uncertain intervals, accompanied by an abolition of sense and voluntary motion, and ending in somnolency or complete sleep; although perhaps at the risk of being considered hyper-critical, we may remark that the part of the definition which indicates epilepsy as a disease returning at uncertain periods, appears to us objectionable. We know that instances occur in which an epileptic fit attacks a patient for the first and only time; and even in those cases in which it is the first of a series, the original one is the same in its nature and as marked in its symptoms as all which succeed it.

Aretæus appears to be the only writer on epilepsy, among the ancients, who is worthy of much attention. He has given a very good description of its symptoms, causes, and treatment; and what he has said may be read even now with considerable advantage. The attacks of epilepsy are sometimes sudden; sometimes as in apoplexy, they are preceded by certain premonitory symptoms, such as languor, torpor, pain or giddiness in the head, drowsiness or disturbed sleep, dimness of sight, and tinnitus aurium. Among other precursors, Aretæus enumerates fulness and distension of the veins of the neck, and nausea and vomiting, especially after eating. Immediately before the fit, he adds, flashes of light appear to the eyes, of purple or black, or

of various colours mixed together; disagreeable odours are perceived; and patients become bilious and apt to be angry without cause. But the most remarkable percursor of the disease is a sensation difficult to describe, which generally passes from the extremities to the head, and is immediately followed by the paroxysm. This sensation has been likened by some to that of a cool gentle air blowing on the part affected, and hence called *aura epileptica*; to a stream of cold water, or to the creeping of insects. The aura epileptica, in some cases seems to be the conquence of an irritation of a nerve in the part from which it arises; but more importance has been attached to this phenomenon than it really deserves, and it has often been treated of as a cause rather than a symptom of the disease. It is probable that in many instances the real cause of this sensation is to be found at the sensorial extremity of the nerves of the parts in which it seems to exist; in this respect it may be classed with certain other illusions dependant on the morbid actions of the sensorium, such as muscæ volitantes, imaginary sounds, phantoms, and other false perceptions. This explanation does not however appear to be applicable, at least without some modifications, to all cases. Several authors mention cases in which the aura epileptica appeared clearly to arise from local disease; but some, of these at least, rest on very questionable authority. Thus Tissot relates, that in the case of a young lady, the physician *suspected* that the attacks were caused by the dislocation of one of the sesamoid bones of the great toe; the toe was amputated and the patient recovered. In another case of the same kind the aura proceeded from the lower part of the leg, where however nothing was to be seen; the physician however *suspecting* that the cause must be seated there, thrust a scalpel two inches deep into the part and felt a small hard body, on the removal of which the patient immediately recovered *.

In the opinion of most pathologists, consciousness and volition are suspended during the attack, though there are some who doubt the universality of this occurrence. The organic as well as the animal functions are often much deranged; the heart palpitates, the pulse is irregular, the breathing is oppressed, laborious, or stertorous. As the paroxysm abates, the convulsions become less violent, the breathing more free, the pulse more full, slow and regular, and the patient falls into a state of somnolency or profound sleep, on awaking from which, he by degrees returns to his usual state, nothing more than languor or lassitude remaining.

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* TISSOT Œuvres par Hallè. Vol. 10. p. 87.

The TERMINATIONS of epilepsy are various; sometimes in apoplexy, sometimes in paralytic affections, particularly of the nerves necessary to hearing and vision; but most commonly in idiotism.

Dissections.—The morbid appearances in those who have died of epilepsy are chiefly found in the cranium; and are effusions, particularly of serum, tumours, abscesses, exostoses, spiculae of bone, &c. Dr. Cooke seems however to attach less importance to these circumstances, of which he has given, as it appears to us, but an imperfect and badly arranged view, than to the investigations of M. Wenzel into the connection of the state of the cerebellum with epilepsy; though in our opinion he rates these more highly than they really deserve as no uniform appearances were ever observed. He remarks it as strange, that in the accounts of morbid appearance given by eminent anatomists, no notice has been taken of the state of the cerebellum, whilst M. Wenzel states that he has always found it greatly injured.

M. Wenzel had an opportunity of examining the heads of twenty persons, who had died after epilepsy of the worst kind. In fifteen of these the brain was uninjured, but of the rest, the meninges in two were slightly diseased; in four, an effusion of thick lymph was observed on the surface of the brain, and in these, a considerable quantity of water in the ventricles, and in one instance a softening and enlargement of the brain was seen. The parts which M. Wenzel found to be principally affected were the pineal gland and cerebellum; the former often, the latter always, in a greater or less degree, though there was even here no uniformity in the morbid change, for in ten instances the pineal gland was almost entirely of a grey colour; in one, it was white in its anterior part, and of a pale red in one half of its posterior part; in another, a brownish yellow transparent vesicle was observed on the surface of the pineal gland; in a third, the pia mater surrounding it was thicker than ordinary, and partly of a red, partly of a yellow colour. It was always softer, and, except in two cases, smaller than natural; in those two it was much enlarged. In three instances, the infundibulum was more firm than natural, and lymph was effused about it. The upper part of it was of a red colour, and bore marks of inflammation. In one case the whole surface of the cerebellum appeared unequal and furrowed; in another, about the insertion of the infundibulum, there was a large excavation; and in a third, there was a great depression of the anterior edge of the cerebellum. Its colour was sometimes pale, but more com-

monly of a dusky red, approaching to blackness. In three cases, it was very soft; in five others harder and more compact than natural. After making horizontal sections of the cerebellum, M. Wenzel found in ten cases of the twenty, between the lobes, a yellow, friable, solid matter. Sometimes a half fluid viscous lymph was seen separating the lobes. In those cases in which the cerebellum was much enlarged, a great quantity of lymph was seen between the lobes. In some instances diseased appearances have been met with in the chest, abdomen, &c. in others, on the contrary, no marks of disease are to be met with in any part.—From this detail it is obvious that nothing has yet been gained from dissection.

Distinctions and Causes.—Various distinctions of epilepsy have been proposed by different authors; that which Dr. Cooke has adopted, is perhaps the most natural and practically useful: namely into idiopathic and symptomatic; the first a primary affection of the brain; the latter, that which has its origin in some other part of the system, and affects the brain secondarily. The causes of epilepsy are either predisposing or exciting. The nature of the predisposition is altogether unknown; it is by some thought not absolutely necessary to the production of the disease. Dr. Cooke however thinks it evident that a certain constitution of brain and nervous system exists in particular persons, which renders them especially liable to this disorder. Nothing is more clearly ascertained than that this predisposition is often hereditary. In whatever it consists, the predisposition is evidently increased by a plethoric state of body, and in some degree by the influence of habit.

Among the existing causes which act primarily on the brain, the chief are mechanical, as mal-conformation and injuries of the cranium, tumours, congestions, and other affections of the brain, cerebellum, &c. Dr. Cooke supposes that these act by stimulating or compressing various parts within the cranium, in the same manner that they produce apoplexy. This doctrine, relative to what is called pressure of the brain, has always appeared to us extremely unsatisfactory. If appoplexy were uniformly dependent on extravasation of blood or other fluids it might perhaps be admitted, but it is now well know that cases presenting all the symptoms of apoplexy occur, in which dissection shews neither ruptured vessels, nor effused fluids. Some—M. Rochoux for instance *(see our preceding Number)* may say that therefore they are not apoplectic: but as our knowledge of diseases is grounded on their signs or symptoms, and as the cases in question present all the symptoms of true apoplexy, this apellation

cannot with any justice be witheld from them. Others again will assure us that in such instances the cause of the disease is certainly pressure, and that the compression is caused, not by effusion, but by the distended state of the vessels. But here they seem to forget that it is necessary to account for the occurrence of this congestion, which can only be done by referring it to the particular condition of the brain, which in fact causes the symptoms, and, if we may so express ourselves, calls for this increased afflux of blood. These remarks are as applicable to epilepsy as to apoplexy, for Dr. Cooke thinks with M. Portal that they differ only in degree, great pressure causing apoplexy, and a slighter one epilepsy. On this hypothesis it is obvious that the fatal termination of an epileptic should uniformly be by means of apoplexy. This however is far from being the case. What are commonly called symptoms of pressure, we consider as the effects of certain unknown vital changes occurring in the brain, often co-existent with, but by no means essentially dependent on vascular congestion, or on effusion of blood or other fluids. The congestion, and these effusions are in fact the consequences, and not the cause of the disease which gives rise to the symptoms.

Among the other exciting causes of epilepsy are to be reckoned the passions of the mind, and forcible impressions on the organs of sense; also worms, certain poisons, and the suppression of habitual evacuations. A great proportion of epileptic cases are secondary or sympathetic, being connected with several general morbid affections, particularly of the nervous system, and of the abdominal and pelvic viscera. We perfectly coincide with this opinion, though it has been sometimes denied. We must recollect, however, that although epilepsy, like other nervous affections, may occur sympathetically as the consequence of distant disorder or disease, yet in accounting for the symptoms and directing the treatment, we must look to the state of the brain as the actual cause of the disease. In other words epilepsy is always the consequence of a certain condition of the brain, though this condition may be produced either directly by certain causes operating on it, or indirectly, through the medium of remote parts with which it sympathizes.

Diagnosis and Prognosis.—Of these little need be said, as the only disease with which epilepsy can be confounded is hysteria, and indeed it is questionable whether there be any other distinction between them than that of their degree. The prognosis must be regulated by the age, sex, condition, and habits of life of the patient; by its being hereditary or otherwise; by the probability of the existence of organic disease, and by other cir-

cumstances to which we have already adverted in the history of the disease.

Treatment.—Dr. Cooke divides the treatment into that of idiopathic, and that of sympathetic epilepsy. Where the disorder is preceeded by signs of congestion in the head in plethoric persons, speedy depletion ought to be had recourse to, by blood-letting, purging, &c. In advanced age, or in debilitated habits, evacuations of blood must be made with caution; in such cases the application of leeches or cupping-glasses may be sufficient. In the paroxysm, the patient should be placed with his head elevated, and all pressure removed from about the neck; the convulsive motions, when violent should be restrained; and a cork or napkin introduced between the teeth to prevent injury of the tongue. Dr. Cooke is adverse to the practice of bleeding during the fit; the application of stimulants to the mouth or nose, frictions, &c. he believes to be useless, if not dangerous.

For the RADICAL CURE, we must trust to measures employed in the intervals. With this view, it is important that the epileptic habits should be broken, by avoiding every thing connected with the complaint, or that might bring the thought of it to the mind of the patient. By some the disease is considered incurable, when hereditary; but Dr. Cooke doubts the truth of this doctrine, and thinks it injurious, as tending to discourage the exertions of the physician. In the cure of idiopathic epilepsy, the indications are, to correct the predisposition to the return of the fits, and to remove the exciting causes. "It is not easy" says Dr. Cooke, "to understand how states so opposite should exhibit the same symptoms; yet we know that epilepsy is connected sometimes with plethora, and sometimes with debility, and has been relieved or cured by treatment calculated to remove these opposite states."

In PLETHORIC epilepsy, depletion is to be employed, by means of blood-letting and purging; also by setons, issues, &c. Tissot was a most strenuous advocate for bleeding in this disorder, and quotes instances of its good effect from Rhodius, Riverius, Severinus, and others. In the same line with blood-letting, may be ranged pressure on the carotids, as proposed by the late Dr. Parry (*Mem. Lond. Med. Soc.* vol. ii. 1788). Dr. Cooke quotes a case, on the authority of Mr. Earle, in which it was found decidedly useful. Some, as Heberden, think that blood-letting is injurious; he was opposed also to purgatives. Those who recommend bleeding have generally combined cathartics with it, particularly of the drastic kind. Emetics are generally discouraged. Artificial discharges, and the restoration of suppressed

evacuations are often of great service. With these measures must be combined a proper diet and regimen; animal food, excessive nutrition, and too much sleep must be avoided. Dr. Abercrombie is of opinion, that the remedies of real efficacy in these cases are purgatives and a strictly vegetable diet, with total abstinence from strong liquors; when the disease has not yielded to this treatment, he has not found any other remedies successful.

In epilepsy arising from DEBILITY, a plan, in several respects different from the above, should be adopted. In these cases, active depletion would prove injurious; the bowels should, however, be kept gently open, and moderate topical bleeding may be employed, if symptoms of congestion about the head appear. In this form of disease, tonics and antispasmodics have been recommended, and among them cold in a moderate degree, exercise in the open air, and nutritious diet. The principal tonics are vegetable astringents, and certain metallic preparations. Among the former are bark, the leaves of the orange tree, viscus quercinus, &c, but all of them have, of late years, fallen more or less into disuse. The metallic preparations are those of silver, zinc, copper, lead, arsenic, and mercury. Of these, the most distinguished is the nitrate of silver. Dr. Cooke communicates some valuable information on this subject, communicated to him by Drs. Baillie, Harrison, Roget, and James Johnson. Dr. Baillie has a very high opinion of the efficacy of the nitrate of silver: in the case of a lady who had long laboured under frequent and strong fits, in consultation with Dr. Roget he ordered, small doses, which were gradually increased to 6 grains three times a day. After two months the paroxysms became less violent, and occurred at longer intervals, till, by degrees, they entirely disappeared, and the patient has remained for ten years, entirely free from every symptom of the fit. Dr. Harrison remarks, that epilepsy, especially that connected with hysteria and hypochondriasis, is a very common disorder in Italy; where, however, the anti-epileptic power of nitrate of silver was not known, until he successfully administered it to Mr. More, an eminent engraver at Naples. In consequence of Dr. Harrison's success, it was given by Sementini, professor of chemistry, with surprising advantage, in very many cases which he has published. Dr. Cooke notices the peculiar and inexplicable discoloration of the skin, occasionally produced by the administration of nitrate of silver. This phenomenon appears by no means necessary to ensuring the beneficial effects of the remedy.

The testimonies for the utility of certain preparations of zinc,

copper, lead, &c. in the treatment of this disease, are very respectable, but at the same time, in the hands of others, they have completely failed. Mercury, antimony, and arsenic, have been occasionally employed. Dr. Good thinks, "That all these medicines act by taking off the tendency to irregular nervous action, and consequently the tendency to a return of the paroxysm, where a habit of recurrence has once been established." Dr. Abercrombie is of opinion, that the medicines called tonics act beneficially in epilepsy, by restraining vascular action.

Antispasmodics and Narcotics.—Notwithstanding many strong recommendations of valerian, Dr. Cooke considers it as a remedy of little power in this or other nervous diseases. Of camphor, assafœtida, castor, musk, æther, &c. he is willing, however, to allow that camphor and assafœtida are highly useful in other nervous affections. From the trials which he finds recorded, Dr. Cooke thinks that nothing can be confidently concluded respecting the use of opium in this disorder. We believe, that in almost all cases it must be precluded by its specific effects, in producing determination to the head.

When epilepsy is caused by a deranged state of the stomach, emetics and purgatives are indicated. Dr. Roget has seen benefit result from the administration of ipecacuanha in doses not sufficient to nauseate, or, at least, only to produce slight nausea, and continued for some time. This has occurred in young persons, in whom the disease had been of long standing, and therefore more likely to resist the ordinary modes of treatment. For the treatment of epilepsy depending on disorder of the intestinal canal, or on uterine affections, we may refer to our analysis of Pritchard on Nervous Diseases, (No. XIII.) Such, are the principal means of cure, for, at the present day, we do not attach much importance to the superstitious notions which the ancients entertained of the operation of certain specifics.

We shall here conclude our analysis of the treatise, which fully justifies Dr. Cooke in expressing the hope "that the description he has given of the experiments, observations, opinions, and practice of the most celebrated physicians, will prove in some degree useful, both by lessening the labours of the student, and by affording practical assistance to persons who are actively engaged in the duties of the profession." (*An Analysis of* Dr. Lobstein—Löbel's "Wesen und Heilung der Epilepsie" *is given.*—QUART. JOURN. II 240*)*.

Ward on Distortions of the Spine, Chest, and Limbs *.

Mr. Ward's object, in the publication of these observations, seems to be that of making known the good effects which he has witnessed from a particular mode of treatment, rather than that of giving any novel information relating to the nature or causes of the diseases which appear in his title page. They might, indeed, with more correctness, be styled Observations on the effects of muscular motion in the cure of certain Diseases. However this may be, it is at least certain, that the work contains much useful information, and many ingenious remarks, and may have the effect of attracting the attention of practitioners in this country, to what may be called gymnastic medicine, a branch of the science comparatively but little studied amongst us; and generally, sometimes indeed, correctly, supposed to savour of empiricism.

The author commences by some remarks on the influence of MUSCULAR EXERCISE on the body. All the vital, as well as animal functions of the living body, have a dependence on each other: those of respiration, circulation, and digestion, as well as of muscular action, are so intimately connected, that whatever injures the one, in some degree affects the others, and any imperfection in the performance of one of these processes, is followed by a corresponding defect in the rest. He gives instances of this mutual dependence in various cases; as in animals that remain inactive during the winter, in which digestion is completely,—and circulation and respiration, in a greater or less degree,—suspended; in the great extent of the respiratory organs, and the florid colour of the flesh in birds that remain long on the wing; and in the larger capacity of the chest, and consequently greater mass of blood circulating through it, together with the greater strength and firmness which distinguish the male from the female of most animals.

He concludes that the comparative power of muscular parts depends:—1. On the state of the functions of respiration and circulation, and that increased strength is a consequence of increased vascularity and circulation of blood in a part, and *vice versâ* a want of tone and power, of a deficient supply of it.

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* Practical Observations on Distortions of the Spine, Chest, and Limbs; together with Remarks on Paralytic and other Diseases connected with impaired or defective motion, by W. T. Ward, F.L.S. &c. London, 1822.

2. On the degree of exercise or frequency with which they are called into action. 3. On the mental energy or power of volition exerted on them. 4. That the most effectual means of increasing muscular strength is, by the frequent exercise of the power itself, and consequently, the preservation of the healthy actions of those functions by which it is influenced. 5. That the muscular parts have a constant tendency to contract, by which they adapt themselves to the state of the limb or part to which they are attached.

Distortions of the Spine.—Besides the ordinary division of distortions of the spine into lateral and anterior, there is another and perhaps more important one, into those which are, and those which are not connected with disorganization of the osseous parts of the spinal column. It is to the latter form of disease that Mr. Ward's observations are confined. The lateral curvature is generally, perhaps always, the consequence of some affection of the soft parts connecting the individual vertebræ; the anterior, on the contrary, may be either of this kind, or as is more commonly the case, produced by caries or some similar disease of the bones, it is almost unnecessary to remark upon the importance of a correct diagnosis in such cases, for the purpose of indicating a proper mode of treatment.

Lateral curvatures most frequently occur in young persons during the period of growth; the anterior curvature, without disease of the bones, is met with at a more advanced period of life, as a consequence of chronic rheumatism, or any long protracted disorder, causing muscular weakness. The intervertebral substances are generally thinner than natural, but more particularly on the concave side of the curve. The muscles are more pallid than usual, and finer and smaller on the convex side of the curve than on the concave, where they are shorter and fuller. The ligaments also are weaker than in a state of health.

Mr. Ward thinks that this form of disease is of increasing frequency, more particularly among females of the higher classes, which he attributes to the attention paid to the improvement of the mind, and the acquirement of accomplishments, in a degree incompatible with the quantum of exercise necessary to the preservation of health. Among the causes contributing, though remotely, to its appearance, he enumerates the practice of neglecting to suckle children, and the habit of loading the infantile stomach with superfluous food. It has been supposed that certain habits, such as sitting awry, or standing on one leg, has a share in producing the distortion; but as Mr. Ward remarks, these are, in fact, efforts to restore the disturbed equilibrium of

the body, and should therefore be considered rather amongst the first symptoms indicating that an alteration has already taken place in the relative position of the trunk with respect to the pelvis, and of the vertebræ, with regard to each other.

Mr. Ward thinks that the common opinion on the subject of distorted spine is, that it always has its origin in caries of the vertebræ, or in a morbid state of the bone tending to it. That this is the case as regards the anterior curvature we admit, but by no means so in relation to the lateral. On the contrary, we believe, it has been very much the custom to consider the latter as being nearly independent of any change of the osseous parts. That this at least is generally the case, we are ourselves convinced, though we allow that cases of lateral curvature do occur, the cause of which is to be found in disease of the bones. When we say that lateral curvature is independent of disease of the bone, we should remark, that we mean the scrofulous or tubercular change; for it is probable that most cases are connected with that state which we observe in rickets. Where this has been the case, we have generally observed, that the form of the curve was more abrupt and angular than in those instances which were independent of actual disease of the bone. It is probable that the views of those who support each side of the question have been too confined, though we think that we are correct in saying, that the number of lateral curvatures produced by change of structure of the bones, is not so great as that of anterior curvatures unconnected with it.

It has been observed that the curvature takes place more commonly to the right than to the left side, a circumstance which Mr. Ward in some degree attributes to the unequal bulk and weight of the arms, operating, perhaps, on predisposed subjects. He considers, however, that the first in the chain of causes is muscular debility, as evinced by a sense of lassitude and fatigue, and by a disinclination to exertion. In the lateral curve there is commonly a second, or even a third, as a consequence of the first, from the unconscious efforts made to preserve the equilibrium of the body. It is not attended by pain, but merely by a sense of fatigue and weakness. The period of time required for its formation varies from one to several years, though the process may be hastened by constitutional disturbance.

The anterior curvature as a sequela of chronic rheumatism, appears to be induced by the patient inclining forward, with a view to procure relief from pain, producing debility in the muscles of the back.

The mode of treatment which Mr. Ward proposes, is alto-

gether founded on the proper application of the principles which he has laid down, and particularly that of restoring the balance of power between those muscles which are contracted, and those which are in a state of extension. The means of effecting this object are of two kinds; they may, however, be divided into passive and active; the former comprehending all those external means which have the effect of increasing muscular power, such as friction, shampooing, percussion, position, galvanism, and electricity; the latter consisting in the excitement of the muscles by volition and exercise. Friction and manipulation appear to be useful from stimulating the nerves of a part, increasing the circulation, and favouring the increase of muscular size and strength. As these measures differ principally in degree, Mr. Ward recommends that the choice of their application, and the frequency of their repetition should be regulated by the sensibility of the parts, and the state of the disease. He gives the very judicious general rule, to commence with that mode of excitement which produces the least uneasiness, and gradually to increase it as the susceptibility to its influence diminishes.

Though in general favourable to the adoption of the recumbent posture, particularly in the anterior curvature, Mr. Ward is of opinion, that it is by no means absolutely or exclusively necessary, and advises that it should be pursued only to such an extent as is not productive of inconvenience to the patient. But these measures are not to be relied upon exclusively, as it is obvious that the only means of effecting a permanent cure, is by giving additional tone and strength to the muscular parts, which, from long disuse, have become incapable of fulfilling their office.

This intention is to be attained by compelling the muscles to exert themselves with energy to restore the spine to its natural situation. One of the methods which Mr. Ward employs is the following: a weight appended to a cord is passed over a pulley, and the other extremity, having a strap attached to it, is fastened round the patient's head; the pelvis being fixed, the patient is directed to raise the weight by drawing the head and trunk backwards, and to repeat this effort until fatigue is induced. The frequency of the repetition of this exercise, and the weight to be raised, must of course depend on the patient's strength. It is equally applicable to the anterior curvature of the spine, as to those which take place laterally. The different means of muscular excitation should be combined. Mr. Ward has witnessed cases in which friction, or the inclined plane have been singly employed without success, and which have recovered under a combined plan of percussion, strong muscular exertion,

and the recumbent posture. He has also remarked, that when the recumbent position alone has been relied upon, dyspepsia occurs, sometimes to a distressing degree, which is not the case if recourse be had to occasional exercises followed by repose; this plan, tending on the contrary to increase the powers of digestion, and to promote the restoration of bodily health as well as of muscular strength.

The views which Mr. Ward adopts of the causes producing distortions of the spine, and of the most suitable mode of treatment, naturally lead him to condemn the employment of mechanical contrivances for restoring the natural form. All such require a fixed point of support on the pelvis, and his experience coincides with that of Mr. Wilson, in shewing that they have a tendency to induce distortion of that part. In addition, by taking off the weight of the body, they indirectly cause the muscles of the spine to diminish in bulk and power, and thus perpetuate the disease they are intended to relieve.

Deformity of the chest.—As the bones forming the thorax derive their support from the spinal column, any incurvation of that part will necessarily be accompanied by a corresponding displacement of the ribs and sternum, and the removal of the spinal distortion will usually be followed by an improvement in the form of the chest. Instances, according to Mr. Ward, do however occur in which considerable deformity exists in the thorax, without any derangement in the spine. The treatment of deformity of the chest alone, was, in fact, suggested to him by observing the amendment that took place in such cases, whilst his attention was directed to the removal of the incurvation of the spine.

The general appearance of the chest, in the disorder in question, is marked by an apparent projection of the sternum, which seems rather to arise from a loss of the arched form, and a flattening of the ribs on each side, than from any unnatural protuberance of the bone itself. Sometimes there is a falling in of the breast bone, producing a preternatural hollow instead of a projection, in which case the edges of the false ribs are frequently turned in upon the lungs, the ensiform cartilage can scarcely be felt, and not unfrequently one side of the breast is flattened, whilst there is a corresponding swelling on the opposite side. The diminution of the size and capacity of the chest is productive of various complaints, which at first may not be suspected to arise from this cause, namely, difficult respiration, pain in the chest, frequent palpitations, and all the symptoms attendant on an interrupted, quickened, or disordered respiration. The principal causes concerned in the production of this state, are general constitutional disorder, and a want of power in the muscles

of the thorax, as a consequence of inactivity and a want of proper exercise. Mr. Ward asserts, as an unquestionable fact, that children who have been nourished entirely by the breast, have generally a much larger circumference of the chest than those who have been brought up in any other manner. There are some other causes of a local nature, such as undue pressure made on the chest, from the child being constantly held in one position without exercise, or in consequence of its being tightly laced or clothed.

The LOCAL TREATMENT recommended, in such cases, by Mr. Ward, is by no means intended to preclude a proper attention to the diet and general state of the constitution. In cases not complicated with spinal disease, it consists in placing the intercostal muscles and those connected with the anterior part of the chest on the stretch, by putting the patient in a standing posture, with the back against a cylindrical piece of wood, the arms being extended backwards. While in this position he is directed to take deep inspirations; manipulation, and afterwards percussion, are to be employed for one or two hours during the day, gradually increasing them in force according to the influence produced. The patient may also be directed to suspend the body by the arms, and use similar modes of exercise. The benefit to be derived from this plan will, of course, depend much on the age of the patient; if the sternum and ribs be not completely ossified, more advantage may be expected from a steady perseverance in the means recommended, than at an age where the bones have acquired a more solid state; but even in the latter case much may be done by the increase of muscular power for the relief of the patient. The effects of this plan are not confined to the removal of the local disorder, but are attended by still more important consequences in the improvement of the general health. In proportion as the parts are restored to their natural form, the frequency of the pulse diminishes; the respiration becomes fuller and easier, and the actions of the digestive organs become more regular and natural.

Contractions of the Limbs.—The cases of contraction of the limbs to which local treatment is applicable, are those in which true anchylosis has not taken place, and in which the motion of the joint is only partially lost. The term *contraction* conveys in some degree, an incorrect idea, as in the great majority of cases, independently of other causes, the incapability of motion rather has its origin in muscular weakness, and is to be regarded as a consequence of decreased energy in the power of the muscles, more particularly of those which extend the limb. Considerable attention to diagnosis is necessary to ensure the application of the treatment in such cases only as are

of a nature to be benefitted by it, and neglect on this point cannot fail to be attended by disappointment and even material injury. The immobility and consequent loss of power in the muscles is principally owing to the diminution of their size, from inaction; it must, therefore, be an object of the first importance to endeavour to restore these organs to the performance of their office. The principle of the measures to be employed is obviously the same as of those recommended in distortion of the spine and chest. Considerable caution, however, must be observed in cases in which there has been long continued inflammation, from whatever cause arising. Mr. Ward selects the knee to give an exemplification of the plan to be in general adopted. Particular attention must be paid to the state of the constitution and bowels, and the treatment is to be suspended should it excite inflammatory action. He thinks it better to trust to the absorption of effused lymph, and to the influence of gentle exercise than to incur the risk of producing irritation by friction, &c., on the joint itself. In the first instance he directs friction, manipulation, &c., to be applied to the extensor muscles of the thigh only. If the angle at which the tibia is fixed on the femur be acute, the patient is placed sitting on a high chair, a line passing over a pully, is affixed to the heel with a small weight attached to it, and he is desired to pull it forward, and repeat the effort until fatigue ensues. In proportion to the increased strength of the muscles, the weight, as well as the time occupied in the exercise, should be gradually augmented.

When by these means considerable motion has been acquired, and sufficient strength to allow the patient to bear his weight on the affected limb, the flexor muscles are to be extended by placing the foot on an inclined plane, the heel on the ground, and the toe towards the upper part. In this position the patient should stand on the affected leg only, holding by the back of a chair, so that by moving the body backwards or forwards, the flexor muscles may be proportionally extended.

Paralysis and Chorea.—In these affections the principle of muscular exercise may often be advantageously applied, but it is obvious that from their nature and the attendant circumstances, the sphere of its utility must be much more circumscribed than in the instances we have above described. It ought, however, to be tried as a useful auxiliary to other means.

Our limits do not admit of inserting the interesting cases which Mr. Ward has related in support of the safety and efficacy of his mode of practice. The work is plainly and sensibly written and affords a very happy illustration of the advantages to be derived in the practical part of medicine from the application of correct physiological principles.

Campbell and Mackintosh on Puerperal Fever *.

Before the appearance of these works, reports had already reached us of the existence of epidemic puerperal fever in Edinburgh, but we were far from being aware of the extent to which it had proceeded, or the fatality by which it had been attended. Another circumstance is also but too evident, namely, that the different views entertained by different individuals on the nature and treatment of the disease, have given rise to some unfortunate dissentions, but too much resembling those which have so often been witnessed in that city.

We may mention among others, a pamphlet entitled "Notes on Dr. Mackintosh's Treatise on Puerperal Fever, by James Moir, Surgeon," which reminds us of another of a rather older date, bearing the *assumed* name of "James Johnson." It is a singular mark of a bad cause, or at least of cowardice, when a controversia list thus shrinks back from the brunt of the battle and screens himself behind a man of straw. It is most evident that Mr. Moir, if not Dr. Hamilton's amanuensis, must have been very familiar with his MSS., and at all events authorised to copy from them *ad libitum*. We certainly do not admire his genius for selecting, nor his scurrilous vituperations of the authors under review.

Of the two books which head the article we give a decided preference to that of Dr. Campbell. He has judiciously confined himself to the task of relating what, (and in what light) he observed in the disease, and the treatment that he employed with success. Dr. Mackintosh, on the contrary, has undertaken to treat on the disease at large and to illustrate its pathology. We fear he has been too hasty, and not altogether aware of the extent and difficulty of his subject. For our own part, we cannot see that he has added any thing of consequence to what has been said by Gordon, Hey, and particularly Armstrong. At the same time we do not fear the charge of contradiction or inconsistency in saying, that he is not without merit, and that there are portions at least of his work both novel and ingenious, and which

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* A Treatise on the Epidemic Puerperal Fever, as it prevailed in Edinburgh in 1821-22; by W. Campbell, M.D., Lecturer on Midwifery, &c. Edinburgh, 1822. p.p. 303. 8vo.

A Treatise on the Disease termed Puerperal Fever, illustrated by numerous cases and dissections; by J. Mackintosh, M.D., Edinburgh, 1822.

if given with more humble pretensions might have deserved and received a higher praise.

Descriptions of a disease having much correspondence with puerperal fever are to be found in the works of the early physicians, from the time of Hippocrates downwards, but until a comparatively recent period it did not attract much attention from the profession. In 1716, we are told that Strother gave it the name of puerperal fever, since so celebrated, but it was not until the middle of the last century, at which time it raged epidemically in the hospitals of London and Paris, that we had any satisfactory accounts of the symptoms during life, or the appearances on dissection after death. Until a period even yet more recent it was considered as not merely a dangerous, but as a uniformly fatal disease. The eminent practitioners of Midwifery who flourished in this country in the middle and latter parts of the past century, (and never was the science more arduously, or more successfully cultivated,) were unanimous, or nearly so, in this opinion. We may refer to the treatises of Drs. Campbell and Mackintosh, for proofs of the fatality of the disease in the Hospitals of London, Paris, Dublin, Edinburgh, and Lyons—in fact, in every situation in which it made its appearance. It must be a matter of congratulation to every feeling mind to consider, that at present, to use the language of Dr. Campbell, puerperal fever, if detected early, and treated upon sound principles, admits of being cured with as much certainty as other diseases which were at one time considered irremediable. This change has been gradually effected. Astruc, so well known by his history of the venereal disease, had, it is true, the merit of anticipating all who had succeeded him, but his instructions were unknown or neglected, and we have arrived, through the inadequate and vacillating treatment of Leake, Hulme, and Denman, in this country at least, at the more happy results to be found in the writings of Gordon, Hey, Armstrong, and in the books before us.

The first case in Dr. Campbell's practice occurred in the end of March 1821, when the weather was changeable, with sudden variations of temperature. From that period until September 1822, of 789 patients, 79 were attacked with more or less violence, and 22 died. In this time also he understands it to have prevailed in the Lying-in-hospital, and to have proved fatal to several, although the number could not be ascertained. He supposes the disease to have occurred earlier in the city than in the Hospital.

In a great majority of cases, it appeared soon after parturition, generally within the third day. In some cases it shewed itself

in less than twenty-four hours ; more rarely as late as the fourth to the seventh day. In all but three cases, it was preceded by one or more rigors, differing in severity and duration. The shivering is soon followed by distressing pain in the forehead and eye-balls. To the cold stage succeeds, for the most part, a hot, parched skin, sooner or later followed by profuse sweating, chiefly confined to the trunk, and rapidly lowering the increased temperature. The next symptom that attracts attention is pain in the abdomen ; in general it follows the symptoms already described ; at other times there was scarcely any interval between it and the afterpains, the one running into the other. This pain is described as a general soreness, convertible into acute pain by pressure. In some cases the uneasiness is so trifling, that without this essential precaution it might be overlooked.

At the commencement, there is seldom any remission of pain, but as the disease proceeds to a fatal termination, intervals of ease are occasionally remarked, giving a deceptive idea of amendment. The remissions are of short duration, the pain returning with increased severity, and the abdomen becoming so sensible, as not to bear the weight of even the bedclothes. The situation of the pain has been variously described as existing in one or both iliac regions, or in the umbilical, hypogastric or epigastric regions. In Dr. Campbell's practice it was always confined in the beginning to the hypogastrium and ilia, and he is of opinion that those who have described it as being seated chiefly in the epigastrium, have drawn this conclusion from confounding its different stages together. The abdomen is generally more or less tumid, the swelling increasing as the disease advances. The uterus can be felt above the pubes ; and is extremely sensible to the touch and apparently increased in bulk.

As to the circulation, there is from the first, great derangement of the vascular system. In some cases every thing goes on well for a day or two, when the pulse increases in frequency without any other signs of disease than headache. In other instances it was quickened from the time of delivery, and did not diminish as usually happens. Dr. C. rarely found the pulse under 110 after the disorder was fairly established ; on the contrary, it was seldom less than 120. When the disease is fully formed it ranges from 120 to 130, and after it has continued some time more frequently exceeds than falls short of 140. At the commencement, the pulsation is sometimes full, more generally hard ; as the disease proceeds, becomes contracted and thready, frequently intermits, and towards the close is so weak as to be scarcely perceptible.

The appearance of the countenance is remarkable; the face is occasionally flushed; the cheeks have a deep crimson appearance, at other times they are livid, or the patient seems exhausted; in severe cases, the eye is frequently suffused with tears, and the pupil dilated. The patient lies on her back, unable to turn to either side, and presents an anxious appearance, the eyes are dull and inanimate, and she is listless and indifferent to surrounding objects. The upper surface of the tongue is white and moist, except the raphe and edges, which are of a fiery redness. In the advanced stages it becomes brown and parched, and the teeth are encrusted. The thirst, though not at first great, becomes urgent, and the smell of the breath sour and offensive. The skin at first parched, is bathed in partial sweats, and before dissolution is covered with cold clammy perspiration.

Respiration is sympathetically affected, being very cautiously performed and solely by the muscles of the chest, from the dread of aggravating the pain in the abdomen. There is often a troublesome cough. In one case bloody serum was found in the thorax after death.

At the commencement there is nausea, rarely vomiting. As the disease proceeds, vomiting occurs, first of phlegm or frothy mucus, and afterwards of dark coloured matter like coffee grounds. The bowels are generally constipated at first, though obstinate diarrhœa occurs in the last stages. The evacuations are sometimes dark brown, at others greyish or ashy, and generally frothy; always of a most intolerable fœtor. The disease frequently occurs before there is any secretion of milk, but even after its appearance it is diminished or suppressed.

The condition of the LOCHIAL DISCHARGE has given rise to some diversity of opinion, and to a fallacious attempt at diagnosis. The best observers, Drs. W. Hunter, Hulme, Leake, Gordon, Armstrong, and Mr. Hey, have given information on this point, according in every important particular. They assert that it presents various appearances, that sometimes it flows freely, at others is more or less suppressed or changed in its characters. We think that the weight of all the evidence tends to prove, that, in the majority of cases, it is rather diminished in quantity than otherwise, though the exceptions must be allowed to be many. Mr. John Burns, on the contrary, and Dr. Hamilton of Edinburgh, considers that the pathognomonic symptoms of puerperal fever is an unaltered flow of the lochia, and that the cases in which this discharge is diminished or suppressed should be considered as of a totally different nature. This idea would be of little consequence, and might safely be passed without notice, were it not that it leads to a most fatal line of practice, and that

on the part of Dr. Hamilton, at least, it has been supported and promulgated without a due consideration of the abilities and merits of opponents, who, to speak with discretion, will not suffer by comparison with him. We feel almost inclined to suspect, that Dr. Campbell has been induced, by the influence of his name, to attempt to mould and modify the conclusions he drew from his own experience into an accordance with the dicta of the Professor. This may perhaps be excusable at Edinburgh, but the case is different on this side of the Tweed; the authority here receives no more weight than it merits, and we should have felt better pleased if Dr. Campbell had set down with less hesitation what he saw and what he thought.

The fallacy of the supposed distinction is so generally admitted amongst us, that it is scarcely necessary to say any thing on the subject. The disease described by Leake, Hulme, Denman, Gordon, Armstrong, Hey, Campbell, and Mackintosh, accords precisely in symptoms with the supposititious puerperal fever of Mr. Burns and Dr. Hamilton, the state of the lochial discharge in some of the cases only excepted. The appearances on dissection are precisely the same in both, namely, the strongest evidences of active previous inflammation. Dr. Hamilton recommends Hulme's cases as instances of his genuine puerperal fever, and yet that author says "the lochia are diminished in quantity;—it is true that at the commencement there is more or less of a suppression of the lochia;—a fresh flow of the lochia is an eligible sign."—(HULME, *pp.* 10, 13, 33.) If either disease be treated in the manner recommended by Dr. Hamilton it is uniformly fatal, or nearly so; on the contrary, if it be treated in the manner to be presently described, whether the lochia flow or are suppressed, the results are successful in a degree that could not otherwise be anticipated. The assumed ground of distinction presents no analogy to those which are adopted in parallel instances. Puerperal Fever must be considered either as a disorder of the whole system, producing local inflammation as one of its consequences, which is the opinion of Burns and Hamilton, or as a symptomatic or secondary fever, the result of an active and extensive inflammation of the pelvis and abdominal viscera in the female, more particularly of their peritoneal surfaces—the opinion of Gordon, Armstrong, and most practitioners in this country. On the Continent we may quote, as entertaining the same views, Walther of Berlin; Dubois and Chaussier, at the Hospice de la Maternité; Capuron, Gardieu, and Maygrier, teachers of midwifery at Paris; Tommassini, and all the followers of contra-stimulant principles in Italy. The doctrines so ably supported by that school, and by Broussais at

Paris, render the existence of truly idiopathic fevers at least questionable; but admitting the fact, when was the state of any particular discharge or secretion assumed as the basis of a nosological or diagnostic arrangement? Do we not witness typhus and other fevers attended, during life, by the symptoms of local inflammation in various organs, and exhibiting corresponding changes of structure after death? Do we not see such fevers with cephalic, thoracic, and abdominal inflammation; and do we not find in them every variety in the existence and appearance of the secretions of the parts affected? And who has ever ventured to suppose that such varieties formed any fair cause of separation from cases otherwise similar, or required any essential differences in the mode of treatment? With such a statement of facts we leave the question—satisfied that an unprejudiced examination only is required to carry a conviction of their truth.

Our English readers may perhaps think that we have taken unnecessary trouble in proving what few doubted; and, indeed, we should have been content to have noticed this point more briefly, had one or two individuals only been concerned—a Burns or a Hamilton. But when it is considered that these gentlemen are public teachers at Universities, which had, or have considerable reputation, and that one of them is author of one of the best manuals that this or any other country can boast of, the case assumes a contrary appearance. Their situation puts it in their power to fill the minds of their hearers, (often incapable, from inexperience, of appreciating the merits of the dicta of a teacher,) with fallacious distinctions and prejudices only to be removed by the consequences of a practice, painful to their own feelings, and uniformly fatal to those doomed to fall into their hands. To use the sensible language of Dr. Mackintosh, "if each of the young gentlemen who leave Edinburgh, must wade through blood to a conviction of his errors, it cannot be unimportant to inquire into the correctness of the pathology on which their practice is founded."

Besides, Dr. Hamilton has attempted to throw an imputation of ignorance or inattention on others, which, were controversy our object, might with more justice be retorted on himself.

To return to the remaining symptoms; the urinary organs participate, though to no great extent, in the general disorder. The secretion of urine is diminished, and the patient complains of pain on attempting to void it. Before death it commonly escapes without consciousness.

The appearance of the blood drawn is generally sizy, the coagulum becoming smaller at every succeeding detraction. In Dr. Campbell's practice, mania succeeded blood-letting in four

cases, which all eventually recovered. We do not see the propriety of connecting this occurrence with the abstraction of blood, it is more probably a conversion of disease.

The period of the FATAL TERMINATION varied; in some cases no reaction followed the rigors, and the patient sunk in 24 hours or even sooner. We do not think that Dr. Campbell has dwelt sufficiently on this, the congestive form of the disease as it is called by Dr. Armstrong, who has so well described it, and shewn its analogy with similar forms of typhus, &c. On the contrary, Dr. Mackintosh appears to be fully aware of its importance, and the most valuable part of his book consists in the illustrations he has given of it from yellow fever and other diseases. Dangerous as all the forms of puerperal fever are, this one, above all, if it be mistaken or ill-treated, is more particularly so.

A greater number of the patients of Dr. Campbell died on the fifth than on any other day. One died on the first day; three on the second; four on the fourth day; seven on the fifth day; one on the sixth day; two on the seventh day; and one on the eighth day. During the dry warm months the disease was not only less fatal, but less frequent. From July to October 1821, six cases occurred, of which two died, one being past recovery when first seen. In the two months which followed with cold rainy weather, twenty-six cases happened, of which eight were fatal. In the warm months of 1822, the disease again became less frequent and assumed a milder character; of all the cases which appeared from the end of April to the beginning of September in that year, (at least eleven) not one died.

None of the cases were complicated with erysipelas or miliary eruptions, which some have supposed to constitute a part of the disease. He did not meet with any cases presenting from the commencement symptoms characteristic of typhus except two, in which the tongue was brown and parched from the first, but without any other typhoid symptoms than headache.

The terminations of puerperal fever are in resolution, effusion, gangrene, and abscess. The last is the most uncommon of all. By proper treatment, more than three-fourths end favourably.

The NATURE of this disease has given rise to a great diversity of opinions. It has been supposed to be inflammatory, putrid, bilious, or a fever complicated with local inflammation. But it is not necessary individually to examine each of these suppositions. As Dr. Campbell remarks every symptom and feeling from the first moment of its appearance shew it to be highly inflammatory; they are rigors; quick firm pulse; local acute pain; swelling and increased heat. With this idea the appearances found on dissection precisely agree; the vascularity of certain parts is

more or less increased, and we meet with those less questionable proofs of previous inflammation, gangrene, suppuration, effusions of lymph and serum. In every one of his cases Dr. Campbell asserts that these appearances were most unequivocal. We have the concurrent testimony of Leake, Hulme, Denman, Clarke, Gordon, Armstrong, Hey, and Mackintosh to the same effect. This is the case also with most of the modern and many of the ancient continental writers. As to the hypothesis that the disease is merely typhus complicated with abdominal inflammation, Dr. Campbell, though admitting the possibility of its occasional occurrence, is disposed to believe, that in the great majority of cases, there is no just ground for the opinion. He can account for the proposition of the theory by the supposition that its advocates have witnessed the disease and described it as it appears in its advanced stages. Besides, it is well known that puerperal fever is not more prevalent during typhus epidemics than at other periods, and the mode of treatment adopted as a consequence of that idea has been equally unsuccessful with most others.

He finds it more difficult than might be expected to fix the precise SEAT of the disease. The question cannot be answered merely from the appearances on dissection; for were we to consider the part most diseased as that originally affected, we should have a different situation for the disease in every three or four cases. The uterus and its appendages, the intestines, omentum, &c. are the parts affected in different situations in different cases. The only part uniformly diseased is evidently the peritoneal surface of some of the contents of the abdomen and pelvis, which it is of no very great practical importance to discover. With this point is in some degree connected the consideration of the appellation by which the disease should be designated. It is evidently incorrect and opposed to analogy to derive the name of any disease from a series of phenomena which are only secondary, and consequent on others of more importance. We speak of phrenitis, pleuritis, &c. and not of the fever which attends them. The correct term, as implying two material points, the situation and nature of the complaint, is peritonitis, to which we would add the epithet puerperal; for, as Dr. Mackintosh says, it is impossible to separate this form of peritonitis from the situation of the female after parturition.

In treating of the CAUSES, Dr. Mackintosh, in particular, has shewn much judgment and correct observation. "To understand what takes place" he says "we must recur to the changes which take place with conception and continue during pregnancy. Increased vascular action, and determination of blood

to the uterine organs is among the first; menstruation ceases, and more or less of plethora occurs, partly to supply the means of growth to the uterus, &c. and partly to effect the change of the fœtal blood supposed to occur in the placenta. The arteries and veins of the uterus and neighbouring parts are prodigiously enlarged. Together with these there is a peculiar alteration in the action of the nervous system, shewing itself by an increased susceptibility to impressions of every kind." At the end of pregnancy labour ensues, temporarily increasing the action of the circulating and sentient systems. Provision is happily made to prevent the inconvenience which might arise from the increased circulation in parts, now inactive. More or less hemorrhage follows delivery, and is succeeded by the lochial discharge. In the course of a few hours the breasts become turgid, and at the end of a day or two the secretion of milk is established. After delivery the nervous system is yet more susceptible than before, and the slightest impressions produce unusual effects. "An attentive view of these phenomena," says Dr. Mackintosh, "will enable us not only to account for all the circumstances attending puerperal peritonitis, but render it surprising that it does not more frequently occur. We perceive at a glance, how certain causes, such as exposure to cold, to early sitting up, irregularity in diet, the use of stimulants, anxiety, grief, or even slight mental affections, may disturb the balance of circulation, and cause an irregular determination of blood, naturally directed to the vessels most ready to receive it."

Diagnosis.—We are not inclined to go at any great length into this part of the subject. In this disease it is of more importance to ascertain the reality of its existence than to attempt any very minute discrimination. For this purpose we have only to enquire and satisfy ourselves whether or not there be acute fixed pain, or general soreness of the abdomen, particularly the lower part, aggravated by pressure, inspiration, and motion, and attended by increased frequency of the pulse. It is important to remark that the disease, as we have seen it, may be forming during labour.

Treatment.—In relation to the mode of treatment proper to be adopted, there is one essential division, namely, that into cases in which there is, what Dr. Armstrong calls, congestion, in other words, in which no reaction takes; and into those in which the disease is fully formed. Dr. Mackintosh has spoken most fully on the first. From his experience of its success in other diseases of a similar description, he recommends bleeding in preference to other remedies, and that the patient should, if possible, be immersed in a hot bath of at least 112° at the time of opening

a vein. Where a bath cannot be obtained, the feet should be put into hot water, and the body rubbed with powdered salt, or with mustard flour. Stimulants he thinks chiefly useful in rousing vital action, so as to permit the abstraction of blood, but he objects decidedly to the frequent exhibition of brandy, &c. to the exclusion of other remedies. If we are called too late, or cannot get blood to flow, the hot bath and frictions must be principally relied upon, and in such a case Dr. Ward would apply one hundred leeches, as the speediest way of obtaining relief, on the principle that the internal parts of the system are loaded with blood, and that our object should be to restore the balance of circulation, by promoting a natural flow to the surface of the body. In spite of every attention, however, and in no case it is more necessary, a great proportion of those who are fairly attacked by this fortunately rarer form of the disease, must be expected to perish.

In those instances, on the other hand, in which reaction takes place, and in which the Puerperal Peritonitis is fully formed, an active and attentive practitioner may reasonably look for considerable success. But in this disease, as indeed in the phlegmasiæ of all extensive and important organs, every thing depends on the detection of the inflammatory process at an early period, and before sufficient time has elapsed to admit of irreparable local or general disorder. An oversight on this point cannot be redeemed, even after a very short interval; prevention is here, indeed, preferable to cure.

If we are present during the stage of depression, it is evident that the first and most important object must be, to bring about reaction as speedily as prudence and our means permit. This is to be effected by exhibiting warm innoxious diluents, by the use of the warm bath when possible, and similar measures. Emetics are of very questionable utility; they certainly determine to the skin during their operation, but the nausea and depression which succeed very much take away from this advantage.

When the shivering and chilliness have subsided, and are succeeded by moderate warmth of the skin, it will be proper to abstract blood. In this respect, Dr. Campbell thinks, that we should be regulated by the state of circulation, but to us it seems a very inadequate guide. The best are the abdominal pain, and the duration of the disease. In general we have, after reaction, found the pulse full and developed, rather than small and contracted, though the exceptions are numerous. It is improper to attempt to fix any particular quantity of blood to be ab-

stracted: our intention is not so much to take away blood, as by so doing, to stop the progress of the disease, and this may be done as effectually in one case by ten ounces, as in another by forty; we must, in fact, adopt our conduct to the circumstances in which we are placed. Of one thing we feel convinced, that the first blood-letting at least, should always be to such an extent as to induce syncope; any thing short of this tends only to weaken the patient, without giving any material check to the disease. To accomplish our object, without unnecessary loss of blood, the patient should be raised to a sitting posture if circumstances permit. With this precaution we have seldom found it necessary to take more than 20 to 24 ounces, rather under than over the larger of these quantities. With the same view, the opening in the vein should be extensive, or even two might be opened at once. In the more advanced stages of the complaint, the same vigorous treatment is hardly admissable, though we cannot conceive a case in which, with a conviction of the diseased processes continuing, as evinced by pain and other symptoms, and without any signs or doubtful ones of approaching dissolution, it would not be proper to abstract a quantity of blood proportioned to the severity of the patient's sufferings, her strength and other circumstances. Setting aside this question, there cannot be a doubt of the propriety of speedily repeating blood-letting, if the first should have given imperfect, or only temporary relief, nor should we wait until the aggravation of the symptoms proved that the disease was unextinguished; we must anticipate its ravages, and check its first efforts at relapse. As Dr. Campbell observes, we know that without bleeding the patient must perish, and that with extreme suffering; whilst with it, if we fail to cure, we are, at least, able to palliate.

When we have recommended bleeding, we have said every thing that is essential to the cure of the disease; other remedies are of secondary importance. Local bleeding is a most useful auxiliary, and may be resorted to in cases, and at times that will bear venesection; but to be attended with real advantage, it should be practised boldly; not 12 or 20, but 60 or 100 leeches, followed by warm fomentations, which, indeed, are uniformly soothing and anodyne. Dr. Mackintosh speaks favourably of blisters, but we are more inclined to agree with Dr. Campbell, that they tend to increase irritation already existing, and to obscure the complaint. Dr. Pemberton, in his Work on Abdominal Diseases, objects to them in peritonitis, as they render it difficult to distinguish whether or not the belly be painful on

pressure. If applied at an improper period they may be positively hurtful: we have been informed of cases in which the points of the peritoneum, precisely corresponding to the blistered surface were found, after death, more vascular and inflamed than any others. Neither do we expect much from digitalis; it seems to us by no means suited to the cure of acute inflamtions, and we have seen it produce all its noxious effects, without materially lowering the pulse, or at all checking the disease.

Purgatives certainly rank next to blood-letting, and are often sufficient, after one bleeding, to effect a cure. The natural tendency of the disease is to terminate in diarrhœa, and the best observers have remarked the temporary relief, which, even in fatal cases, attends every evacuation; in such instances it is the last effort of nature, and the attempt to stop it is attended by still more dangerous consequences. The particular purgative employed, is in some degree a matter of indifference, and our choice must be regulated by the habit and condition of the patient. We are in the habit of employing calomel and jalap in moderate doses, followed by a dilute solution of salts, as it is well known that a smaller portion of a saline purgative, considerably diluted, acts more effectually and more speedily than a strong or saturated solution of a larger one. We have never tried either turpentine or half drachm doses of calomel; as to the latter, we believe it a mistaken idea that it is to be depended on as a purgative, and any other effects from its use, are perhaps even more certainly attained by smaller doses. Drs. Mackintosh and Campbell are both opposed to the plan. They likewise agree in discarding turpentine. With Dr. Mackintosh we may say, that on principle we never saw a case in which it would have been admissible, and as a specific we feel little disposition to use it. "When it is successfully employed in peritonitis or enteritis", then, says he, "will I give it a trial in this disease" and we entirely agree with him.

We have little to say of other measures; the progress of the disease to death or recovery is so rapid, that there is little time for the employment of ordinary pharmaceutical agents: but those general principles which every practitioner is supposed to be master of, must be applied in this, as in every other individual case, with those limitations and modifications which its nature may require.

We are far from having exhausted the subject, or even given an account of every thing that deserves notice in the valuable Treatises before us. With such an extensive and weighty sub-

ject, all that we could do, was to select and bring together whatever was best ascertained, most important, and most liable to be mistaken. It is a duty incumbent on every man who practises any part of medicine, but above all midwifery, to make himself familiar with the nature and treatment of one of the most dangerous, and, till lately, most fatal diseases that exists. If what we have here said, should promote the acquirement of this knowledge, or help to throw any light on these points, our purpose will be fully answered.

Encyclopaedia Medica,

OR

A QUARTERLY HISTORY OF IMPROVEMENTS AND DISCOVERIES, BOTH AT HOME AND ABROAD,

IN

ANATOMY,	SURGERY,	MATERIA MEDICA,
PHYSIOLOGY,	PRACTICE OF PHYSIC,	PHARMACY,
PATHOLOGY,	MIDWIFERY,	CHEMISTRY,
MORBID DISSECTIONS,	FORENSIC MEDICINE,	BOTANY, &c.

Forming a useful Library of Practical Reference.

I. ANATOMY.

1. DR. JACOBSON, *of Copenhagen, on the Venous System, of Birds, Reptiles, and Fishes.*

IN man and the other mammalia, the veins of the inferior and posterior part of the body meet in one common trunk, forming the vena cava inferior, and going directly to the heart. But in birds, reptiles, and fishes, these veins do not go to the vena cava inferior, and afterwards to the heart, but pass to the kidneys, or to the kidneys and liver. 1. In some fishes, such as the cyprini and clupeæ, the veins from the skin and muscles of the middle part of the body unite into several trunks, and run in various directions to the kidneys, in which they are finally distributed. The caudal veins meet in a common trunk between the kidneys, receive their recurrent branches, (*venæ renalis revehentes*) and uniting with the veins from the testicles or ovaries, form the vena cava inferior. 2. In other fishes, such as the raiæ, the squali, the esoces, and the pleuronectæ, the caudal vein divides into two branches, and these having received other single veins from the middle of the body, are divided in the kidneys. These single veins sometimes pass separately to the kidneys. The vena cava is formed as in the

preceding case. 3. In all birds and amphibious animals, as well as in the muræna and the lophii, the veins are formed in the same manner, with this difference, that the caudal vein before proceeding to the kidneys, gives off a large branch to the vena portæ to be carried to the liver. In amphibious animals, the caudal vein receives branches from the *proper organ*, or the membranous sac, which contains fluid or fat, and opens into the cloaca. In birds, there is a small branch formed from the ischiatic and the inferior crural vein, which goes directly to the vena cava. This is a manifest transition to the venous system of the mammalia.

Dr. Jackson is of opinion that the venous system of birds, reptiles, and fishes, is destined to convey the venous blood to the kidneys, or to the kidneys and liver, for the purposes of secretion; and hence, the renal secretions in these orders of animals, is from venous blood.—By examining embryos, this system was found to owe its origin to the omphalo-mesenteric veins. (Oken's *Isis.*)

2. Dr. Horner *on a New Muscle in the Eye.*

A muscle has lately been discovered, by W. E. Horner, M.D. Ass. Prof. Anat. University of Pensylvania, situated at the internal commissure of the eyelids, on the posterior part of the lachrymal ducts and passing from the flat surface of the os unguis towards the puncta lachrymalia, which has a curious and interesting influence on the position and functions of the puncta and of the eyelids.—Chapman's *Journal.*

3. Mr. Henry Earle *on the Mechanism of the Vertebræ.*

In birds, the mechanism of the spine, and the spinal canal, is so contrived as to allow a remarkable extent of motion in the neck, without the medullary column suffering from pressure. It is a very singular fact, that in birds, the cervical vertebræ are numerous; but that the number varies from nine to twenty-four, while among mammalia, there are uniformly seven, except in the three-toed sloth. He exemplifies this in the short-necked mole, in the horse, and in the giraffe, whose neck is, we believe, about four feet long.—(*Phil. Trans.* Pt. II. 1822.)

4. Mr. Wilson's *Comparative Anatomy of Trochilus Colubris.*

On dissection, the heart of the common Humming-bird was found to be remarkably large, nearly as big as the cranium; and the stomach, even when distended, uncommonly small, not exceeding the globe of the eye, and scarcely more than one-sixth part as large as the heart. The fibres of the heart were also exceedingly strong. The brain was in considerable quantity, and very thin. The tongue was perforated from the tip, the whole extent of the bill, forming two closely attached cylindrical tubes. The other extremities of the tongue corresponded exactly to those of the woodpecker, passing up the occiput, and reaching to the base of the upper mandible. These facts were verified in five different subjects; in all of whose stomachs were found insects, either whole, or in fragments, so that the bird does not live solely, if at all, on honey, or the juice of flowers. (*American Ornithology.*)

5. Dr. Reisseisen *on the Structure of the Lungs.*

In an Essay on this subject, our author was considered equal to Sömmerring, who was at the same time candidate for a prize offered by the Berlin Academy. He proved, contrary to Helvetius, and in some degree accorded with F. Meckel, that the lungs are a very minutely divided extension of the trachea, the branches of which gradually lose their cartilaginous portion as they divide, and continue their course till they end, not in cellular membrane, but in a simple membranous cul de sac. Over this a vascular plexus is spread, arising from the bronchial arteries, out of which the pulmonary veins at once spring; and of course, the arterial blood is mixed with the venous blood. The bronchial veins, again, do

not form a trunk, but open separately into the pulmonary veins, which return the blood to the heart. He thinks he has demonstrated, in opposition to Haller, that the lungs are well supplied with nerves, not from the intercostal, but from the pneumo-gastric; and he denies all anastomosis *in the lungs* with the eighth pair. He considers the state of collapse as the natural state of the lungs.

(*Saltzburger Zeitung Medizin und Chirurg.*)

II. PHYSIOLOGY.

6. M. ITARD *on the Transmission of Sound by the Eustachian Tube.*

M. Itard controverts the received opinion, that sound is partly conveyed to the ear through the inner opening of the Eustachian tube. The experiment upon which the common opinion is founded is, that when a watch or other sounding body is made to touch the teeth, it is heard more distinctly. It is unfortunate, M. Itard thinks, for this theory, that by putting the watch back on the tongue, without touching the teeth, and at the same time, shutting the mouth, the sound cannot be heard at all, though the watch is much nearer the Eustachian tube. We have tried this, and find that M. Itard is correct. But why then, it will be said, do people open their mouths, when listening attentively? Perhaps to allow the sound to strike on the teeth which are good conductors.

(ITARD, *Maladies de l'Oreille.*)

7. PROFESSOR SILLIMAN *on the Effects of Nitrous Oxide on the Organs of Taste.*

The singular intoxicating effects of nitrous oxide, are well known to have caused some of those who first breathed the gas, to say they felt as if "bathed in delight." A man of mature age, grave character, infirm, and in low, gloomy, and depressed spirits, inhaled about three quarts of it, at Yale College. As was to have been expected, he felt great exhiliration, which continued unabated for thirty hours, and more or less for a whole week. What was remarkable and peculiar, was, that he could only relish things which were *sweet*, and for several days ate nothing but sweet cake. Afterwards, he used sugar and molasses, both on his bread, and on his meat and vegetables. His strength was greatly restored, and his mind was relieved from gloom and depression.—

(SILLIMAN'S *Journal*, Vol. V.)

8. M. FLOURENS' *New Experiments on Irritability and Sensibility.*

The researches of this promising inquirer, in some measure tend to illustrate the interesting experiments of Bell, Shaw, and Magendie, of which we recently gave an account, and in some circumstances carry our knowledge still further. M. Flourens lays claim to more precision in his experiments, than former inquirers, whom he blames for not stating on what particular parts of the brain they produced pressure, or what parts they penetrated. In one experiment, (which was often repeated) he cut away the cerebellum of a pigeon in successive layers. It remained spirited, erect, and could see and hear to the last; but the slicing successively produced weakness—hesitation—unsteady agitation—inability to walk and to stand upright; and at last, it remained on the back or the belly, but still restless, though not convulsed, so long as the spinal marrow or the tubercula quadrigemina remained untouched. The power over the voluntary muscles seemed to be the only loss. This is one of his most interesting experiments.

In another experiment, frequently repeated, M. Flourens removed the right lobe of the cerebrum from a pigeon. It instantly lost the sight of the left eye, though the contractility of the iris was not affected; and the right side of its body appeared feeble, though it was otherwise well, and could stand, walk, run, and fly. When the other lobe was removed, the sight of the left eye was lost, though the iris remained contractile; but general debility and stupor succeeded, and volition, memory, hearing, and all perception, seemed to be lost; yet it walked, when pushed, and flew, when tossed into the air. When the cerebrum was left entire, and the tubercles removed, the loss of vision was produced by destroying the contractility of the iris, as the tubercles are, with the medulla oblongata and the spinal marrow, centres of the nerves of motion. The removal of one of the tubercula, produces in the eye of the opposite side blindness and involuntary rotation. The limits, therefore, of exciting muscular contraction, are fixed at the tubercula, and never extend to any part of the cerebrum or cerebellum. (CUVIER'S *Report to the Acad. of Sciences.*)

9. DR. PROUT *on the Chemical Changes of the Chick in Ovo.*

This accurate Chemist has proved or rendered probable by numerous experiments, that in the earlier stages of incubation, an interchange takes place between an oily matter in the yolk, and a portion of the albumen; which portion of albumen becomes somewhat like the curd of milk, while a portion of the watery and saline parts of the albumen mixing with the yolk, augment its bulk. As incubation proceeds, these watery and saline parts again separate from the yolk, and diminish its volume. In the last week of the process, the phosphorus of the yolk is found in the chick, converted into phosphoric acid, united with lime, constituting the bony skeleton; which lime does not exist originally in the recent egg, but is derived from some unknown source, during incubation.—

(*Phil. Trans.*)

10. MR. BRODIE'S *Experiments on the Effects of the Bile in Digestion.*

It appears that Mr. Brodie, whose former physiological researches are of the highest merit, has been for some time employed in experimenting on digestion; and as a specimen of what is to follow, he has published some experiments made chiefly on young cats, respecting the effects of the bile. He was disposed to think, that the bile is intended to convert the chyme into chyle by a chemical change; but to ascertain whether he was right in this, he completely obstructed the flow of bile into the duodenum, by a ligature on the ductus choledochus. It is properly premised, that neither this, nor the ligature on the whole extremity of the pancreas, and the division of the ramulæ of the eighth pair on the cardia of the stomach, produce much suffering or derangement, for digestion goes on, and chyme is formed, as if nothing had happened. The ligature and the consequent want of bile, completely and invariably prevented the changing of a single particle of chyme into chyle—a process which takes place at the entrance of the duodenum, and never higher than the pylorus, above which Dr. Prout could never find any albumen—the chief constituent of chyle. No chyle could be traced in the intestines, or in the lacteals; but both of these were filled with a fluid like the chyme, which became thicker as it proceeded, and at the termination of the ilium, it was quite solid, though not like fæces.

The office then of the bile is to convert chyme into chyle. In cases where there has been morbid obstruction of the choledoch duct, Mr. Brodie thinks it has either not been complete, or when obliterated, has been attended with extreme emaciation: or that nutrition has been imperfectly maintained by the chyme, as appeared from the preceding experiments.

A singular and interesting fact was discovered while prosecuting these experiments. When the animal was allowed to live, it became jaundiced, and bile was seen in the eyes, and in the urine. At the end of seven or eight days, nature had made an effort to repair the injury, by a mass of albumen, (coagulable lymph) being effused above, below, and around the ligature; which, in consequence of ulceration, lay loose in the cavity thus formed. A new passage was in this manner formed for the bile. The same phenomena occurred when two ligatures were used. Mr. Travers observed a similar phenomenon, when a ligature was applied round an intestine.—We anxiously wait for the rest of Mr. Brodie's experiments. (BRANDE's *Journal.*)

III. PATHOLOGY.

11. *Revival of the Humoral Pathology in America.*

Systems of medicine are notoriously under the influence of vicissitude. The leading doctrines of the present day, are in most cases directly opposed to those which referred all diseases to the state of the fluids. This old and obsolete Pathology has, however, it seems, been revived and defended with great boldness and spirit, by Professor Hosack, in the Medical School of New York. The positions defended are, 1. "That most, if not all diseases, arise primarily in the fluids." The Solidists of Philadelphia reply, that all the fluids are derived from the solids, and ask whether it is the blood, or the integuments and blood-vessels, which are first affected in vaccinating? 2. "That the blood is often marked by a morbific lentor or viscidity." It is replied, that this is never the case till the blood be extravasated, and begin to decompose; and in phthisis, rheumatism, and inflammatory fevers, it is perceptibly thinner than an in health." 3. "That the blood sometimes receives sundry kinds of morbific acrimony from without". It is replied, that even the matter of small-pox or syphilis only irritates the solids; such as the punctured integuments, or the lymphatic glands, which by sympathy re-produce the disease in distant parts. In the case of turpentine, garlic, &c. being smelt in the urine, and in the milk, while no such odour is perceptible in the blood, nor in the chyle, it is conjectured, that the odoriferous matter may be re-produced by sympathy, in the same manner. 4. "That the blood sometimes contains a putrid acrimony engendered within." It is replied, that the vital principle is so powerfully antiseptic, that it would immediately correct such a putridity, or the animal would die. 5. "That the blood is the medium in which contagion is generated, multiplified, and diffused through the system". It is replied from experiment, that blood taken from patients in small-pox, cow-pox, measles, or lues, will not infect by inoculation. The contagious matter of plague, &c. is increased by secretion, while the blood remains healthy, like the poison of the rattle-snake, whose blood is not poisonous; or of the cherry-laurel, whose sap-juice is not more poisonous than that of the birch, or sugar-maple.—We think, that if our American brethren would observe more, and write less, they would improve faster. The straining after fine sentences, and the gasconade of metaphor in this controversy, is quite juvenile, mawkish, and offensive.—(CHAPMAN's *Journal.*)

12. MR. HENRY EARLE *on the Pathology of the Spine.*

Dissections have proved to Mr. Earle, that the most distressing nervous symptoms, and even complete paraplegia, may be produced, by adhesions taking place between the membranes of the spinal marrow, (whose freedom of motion is essential to health) and by effusion into the canal, or theca. Affections of the dorsal vertebræ, he found to be much more serious, and more early manifested with respect to spinal disease, than of the cervical or lumbar, chiefly, as it appears from the difference in the capacity of the canal.—(*Phil. Trans.*)

13. M. Malatides *on Congenital Diseases.*

M. Malatides, in his "Tractatus de Otalgia," thinks that congenital diseases may often arise from external injury, such as pressure, blows, and oftener still from imprudent venery; in proof of which, he gives a case of an infant, who had been struck on the head from such a cause, "Vir valide in gravidæ ventrem impegit," and when born, the part was livid, and the child had congenital cophosis.

(*See also*, Reidlin. *Curar. Med.* 553.)

14. Dr. Göden *on the Seat of Puerperal Fever.*

According to the observations and dissections of Dr. Göden, the most prominent morbid appearances in puerperal fever are seated in the serous membranes. He found that the phenomena were by no means confined to the peritonæum; but were obvious also in the pleura, the pericardium, the pia mater, and the arachnoid. This, we think, is of considerable importance, if it be confirmed by subsequent observation; as it will assist us in accounting for many of the anomalous symptoms. We must confess, however, that we are somewhat sceptical as to this sweeping generalization. (Hufeland's *Journal der Heilkunde.*)

15. M. Dupuytren's *Case of Anomalous Pain.*

This affection occurred in a woman, whose age and temperament are not given. The pain was very similar to neuralgia, and it would have been called so, but for its seat, which was neither in any nervous trunk nor division. It appeared to affect the substance of the lips alone and their commissures, with the anterior half of the tongne on both sides. Can we from this case, and numerous similar ones, which daily occur in practice, establish an order of pains different from nervous, under the name of *pains of tissue?*

(*Sceance, Acad. Roy. Med. de Paris.*)

16. Professor Caldwell *on Inoculation of Measles and Plague.*

Notwithstanding what has been said by Home, our author believes that measles cannot be communicated by inoculation at all. He has often tried the experiment with the blood, the tears, the mucous of the nose, the saliva, and the eruptive matter, mixed with water—totally without effect. He believes, though he has not tried, that the same remarks apply to plague, which he denies to be contagious, and thinks that in cases where inoculation has been tried, the patient has caught the disease, not from the inserted matter, but from the epidemic cause.

(*Philadelphia Journal.*)

17. Dr. Walther's *Singular Case of a foreign body, which remained seven years in the Trachea.*

In 1821, a young man, aged 17, applied to Walther, affected with phthisis, from the claw of a craw fish which he had swallowed in 1811, and which had got into the trachea, and remained in the right bronchia, occasioning violent convulsions, coughing, and hæmoptysis. Oil of sweet almonds, followed by opiates, purgatives, assafœtida, and corrosive sublimate eased the cough, and he thought, as he became easier, that the claw must have been removed. There remained however phthisis, which was followed by cramps, which did not yield to bathing. Up to 1814 he expectorated pus, and had repeated feverish attacks in spite of pitch, vapour baths, and Dover's powder. He had subsequently a brain fever, strong convulsions, chorea, strabismus, and somnambulism. Sometime after, he was seized with an irresistible desire to bite, and when he could find nothing else he bit his own hands. He afterwards had distressing optical illusions, and could not look on any thing black without screaming. He lost the sense of taste, and it was painful for him to utter a sentence. His limbs were then paralysed, and he took a great passion for

cutting and piercing instruments, and when alone he cut and stabbed himself. Sometimes he sought to strangle himself; but after the excess of the furious fit was over he complained of great fatigue and of uncommon pains. For two years he amused himself like an infant, during all which time the cough and expectoration continued. After a time his paralysis was partly removed again and he began to walk and to try medicines, all of which he had given up. Every thing was tried, blisters, anthelmintics, camphor, musk, bark, calomel, aloes, hellebore, laurel water, iron, zinc, &c. and all without success. In 1815, his nervous symptoms returned during winter, and disappeared again without medicine in spring. In Autumn they again returned more violently than ever, and his expectoration contracted a very remarkable fœtor. He bruised every thing he could come at, and had a strong propensity to leap out of the window, which he once accomplished from the first floor. His appetite was gone and his bowels torpid. In January 1816 he lost his voice, his sight, and his hearing; but these he recovered in the succeeding summer; and the year following, the same circumstances occurred. In 1818 he lost his appetite, and could only take bread, honey, and coffee. Medicines were again tried with no avail.

On the 27th of April 1818, after a violent coughing for several days, he brought up the claw of the craw fish with a great quantity of pus, and this put him in great hopes of a cure. In 1819 he had a quotidian fever, which was subdued by bark, myrrh, and acetate of lead. In 1820 he took no medicine. During the winter of 1821 he complained of pains in his side, and spit up blood. He tried the vapour of tar and sulphur; the expectoration ceased, he recovered his health, and can now attend to his business.

(GRAFE *and* WALTHER'S *Journ. der Chir. und Augenheil.*)

18. M. PLAYER *on the Morbid Effects of the Spinal Nerves.*

In almost every disease of the extremities, neck, and trunk with its organs and viscera, morbid tenderness may be discovered by pressure or by heat between the vertebræ or in the spinal branches of the nerves which go to the parts affected. Diseases of the head and its organs appear to depend in part on the same cause, if we may judge from the effect of remedies. This tenderness often exists also on the left of the spine beneath the scapula, and opposite the upper part of the stomach, where the intercostal nerves take their origin. In female diseases, the origins of the sacral nerves are often tender.

The best remedies are bleeding by cupping with large glassess over the spine, and afterwards blistering the part, means which are very powerful in easing pains in gout, rheumatism, phthisis, and cancer. In gout, the fit may thus be certainly cured, taking care always to relieve the stomachic intercostals as well as the nerves going to the toe or hand

(BRANDE'S *Journal.*)

19. Dr. RANKEN *on the Epidemic Cholera of India.*

This is the disease of which Dr. Tytler has published a nosological description, under the name of *Morbus Oryzeus*, or the Rice disease. The symptoms very much resemble the effects of poisons, such as depression and atony of the general system, and accumulation of blood in the central trunks, producing irritatiou and derangement of the organs of digestion.

(*Edinburgh Journal.*)

20. Dr JOHN DAVY *on Adhesions and Coagulable Lymph.*

On injecting brandy between the lungs and pleura of a dog, firm and long adhesions were formed in twenty-four hours. This is against the received doctrine of adhesions being weak in proportion to their recentness. When blood is drawn its albumen is liquid, but soon becomes viscid, and at length solid. When in its

viscid state, it may be drawn out into transparent fibres, and bands which soon become opaque and solid, and attain their maximum of strength in a few hours—This furnishes a key to the natural history of adhesions. Dr. Baillie has committed a mistake on this point in his MORBID ANATOMY, Chap i. (*Phil. Trans.*)

21. Dr. CRAIGIE *on the Morbid Influence of the Heart on the Brain.*

The celebrated Malpighi, it is well known, was affected with a complicated disease of the heart and of the brain, and several other cases of a similar kind, particularly one by Heberden (*Trans. Coll. Phys. Lond. V.*) are on record, but the close connection of such diseases seems not to have been much attended to. Dr. Craigie, having met with several cases of this kind, has concluded, that ossification and other organic diseases of the heart, from impeding and retarding the return of the venous blood, tend to produce cerebral extravasation, causing paralysis, apoplexy, coma, and death. He at the same time allows, that cerebral disease, may arise "*spontaneously*", or, in other words, that he is ignorant of the causes. Dr. Craigie very justly censures those who, on the dissection of an apoplectic subject, content themselves with opening the cranium, and never dream of examining the heart and viscera. (*Edinburgh Journal.*)

IV. MORBID DISSECTIONS.

22. Dr. PETER'S *Case of Perforation of the Stomach.*

A woman, aged 52, who had been gouty for eight years, and subject to hysteria and hemorrhoidal flux, was seized with sharp pain in the left hypochondria. After eating she had acid eructations, accompanied with retching and a dull pain in the stomach. The primary pain at length became so very severe as to deprive her of sleep, and in the course of a week she sunk under attacks of incessant convulsion. On dissection, a quantity of very fœtid gas escaped, and in the cavity of the abdomen about four pounds of a yellowish liquid was found. There was afterwards discovered towards the middle of the small curvature of the stomach, a perforation sufficiently large to admit the little finger. The liver and other viscera were healthy. The right ovarium was much enlarged, and traces of a fœtus were found, which was the more remarkable that she was not known to be pregnant. (HUFELAND'S *Journ. der praktischen Heilkunde.*)

23. *Singular Case of Internal Hemorrhage.*

A woman, aged thirty-three years, who had always regularly menstruated, had her menses suppressed, in consequence of catching cold, and getting her feet wet. She fell ill the same evening, and died at noon, on the following day. On examination, no traces of inflammation could be discovered in any part of the body; but, in the abdomen, upwards of three pints of fluid blood were found, without any evident cause being traced for such an occurrence. It is needless to state, that the accident was attributed to the sudden cessation of the menses. (*Hufeland's Journal.*)

24. Dr. JOHN DAVY *on Post Mortem Effusions of Serum.*

It is a subject of considerable interest to determine whether the effused serum, so often found in dissecting, has been poured out previous to death or after it. To determine this point Dr. Davy suddenly killed several dogs by a blow on the occiput, and immediately laid open the pericardium, when a quantity of serum found there was removed with a sponge, and the incisions were closed up by

sutures. Twenty-four hours afterwards the pericardium was again examined, but in no instance was a single drop of serum found though the heart was distended with blood. (*Phil. Trans.*)

V. SURGERY.

25. *Case of Trepan, by* M. DUPUYTREN, *of the Hotel Dieu.*

[Communicated by one of our Paris Correspondents.]

On the 1st of February last, M. Dupuytren performed the operation of trepan upon a patient in the Hotel Dieu at Paris, under very peculiar circumstances. The patient, a young man, had two years before received a stroke with a pointed knife, over the upper and back part of the right parietal bone. For this wound he was admitted into the Hotel Dieu: it soon healed; the patient for a long time after experienced no bad symptoms, when at length a tumour appeared upon the spot where the blow had been inflicted. This tumour suppurated and burst, and a piece of the point of the knife, an inch and a half in length, was discharged through the wound, two months and a half before the date of the operation. M. Dupuytren was of opinion, that the knife must have penetrated through the bone into the substance of the brain. The discharge of pus soon ceased; the opening closed entirely; but the patient began to complain of pain in the head, to experience from time to time rigors, and irregular feverish fits; for which leeches behind the ears, laxatives, pediluvia, &c. were prescribed. These symptoms continued to increase in severity; the patient was struck with total palsy of the left side, and with occasional convulsion of the muscles of the right; in fine, he lost the powers of speech, sensation and intelligence, and lay in a state of profound stupor, with slow stertorous breathing, and with a slow, and what M. Dupuytren considered a feeble pulse. Taking all the circumstances into account, there could be no doubt that the symptoms depended upon compression of the brain; and as M. Dupuytren believed, from a collection of pus between the dura mater and the cranium. The trephine, with the expectation of finding matter here, was accordingly applied in the situation of the wound, and a circular portion of bone removed; and the surprise of the surgeon may be conceived, when the dura mater was considered to be quite healthy. Observing, however, that it projected into the wound, M. Dupuytren cut through the dura mater, but he observed nothing unnatural in the state of the brain below. A bistoury was then plunged to the depth of more than an inch into the substance of the brain itself, and by this opening, an ounce and a half of pus was discharged. The patient, who had not complained during the incisions of the scalp, now complained loudly of pain in the wounded parts; he spoke distinctly, and answered with accuracy the questions put to him, and the paralysis was so much relieved, that he moved his limbs at will, and stretched out the paralytic arm to M. Dupuytren, when he was leaving him.—For more than forty-eight hours after the operation, the patient continued to do well; no symptoms appearing, either of inflammation or compression of the brain. All of a sudden, however, he fell into violent convulsions, which ended in death, in about two hours. The brain was inspected the second day after, and no marks of inflammation of the membranes, or of the brain itself, were discovered. There was a small quantity of pus in the cavity of the abscesses, but not enough to produce any degree of compression. *Paris, 16th Feb.* 1823.

26. M. DUPUYTREN'S *rare Case of Luxation of the Metatarsus.*

It has been denied, that from the structure of the parts, a luxation could take place of the whole metatarsus upon the tarsus; and the arguments have been

supported, at least negatively, by there being no case on record. M. Dupuytren has set the question at rest, by exhibiting an instance of this luxation to the Royal Academy, which occurred to a woman.—(*Sceance Acad. Roy. Med. Paris.*)

27. Dr. Mott's *Case of Ligature of the Arteria Innominata.*

We are indebted to the German Journals for an account of this interesting case,* not having yet received any of the American publications in which it is detailed.—Michael Bateman, a sailor, aged fifty-seven, a native of Salem, in Massachusetts, was admitted into the New York hospital, with a catarrhal fever, and a swelling of the left arm and shoulder. These affections partly yielded to treatment, when he fell by accident upon his arm and shoulder, in consequence of which a violent pain and swelling in his right shoulder followed, and soon after a slight pulsation was detected under the clavicle. On the 3d of May, he felt a pain as if something had rent; and the tumefaction immediately increased to a great size, and the pulsations became more distinct, particularly on the inferior side of the clavicle. He became very feeble, and had a violent cough. On the 7th of May, Dr. Mott called in Doctors Post, Kissam, and Stevens, and it was agreed to tie the subclavian artery, and if it was found affected, to put a ligature on the common trunk. On the 11th, the operation was proceeded with, the patient having previously had seventy drops of Tinct. Opii. Two incisions were made, one in the direction of the clavicle, and the other along the sterno-cleido-mastoideus. The carotid was laid bare, and traced towards the subclavian, which was found so diseased, that they had no alternative but to tie the innominata. They accordingly carried the incisions deeper, and separating the recurrent and the phrenic nerves, they came to the division, and passed the ligature with a curved needle, about half an inch higher. The parts were then brought together by suture, and the wound bandaged. There were only three arteries divided—a branch of the internal mammary, and two branches severally from the inferior and superior thyroid. He lost only about three ounces of blood. The whole operation was about an hour.

The patient immediately after felt quite well—pusle 69—temperature of the arm nearly the same as the other—respiration unchanged. From this period, to the twenty-second day after the operation, he continued to improve, the suppuration went on well, the ligatures came away without accident, and the pulse, which had at one time risen to 120, was reduced by venesection to its natural standard, the cough was disappearing, cicatrization was going on properly, and the swelling becoming gradually less. He was in high spirits, and was so far recovered, that he walked daily in the garden of the hospital. All on a sudden, however, on the 24th day, a hemorrhage from the wound took place, and though it was soon got under, and there was little loss of blood; it recurred twice in the next two days, respiration became painful, and the patient died on the 26th day.

Eighteen hours after death, the wound was black and fœtid. There was no trace of inflammation in the arch of the aorta, the origin of the arteria innominata, or in the lungs. The internal membrane of the innominata was smooth and soft, and its parietes were so thick, that there was only room for a crow-quill to pass. The subclavian artery opened into the tumour; the carotid was filled with coagulated blood. The arteries of the arm were healthy. The clavicle was carious, and almost separated in the middle. The death was evidently caused by extensive suppuration. (Langenbeck's *Neue Bibliothek.*)

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* Bemerkungen über die Unterbindung der Arteria innominata, aus dem Englischen übersetz von Dr. Barkhausen, &c. Langenbeck, Neue Bibliothek für die Chirurgie, &c., III. 4. Hanover, 1822.

See also Gräfe und Walther's Journal der Chirurgie und Augenheilkunde, 1822.

28. DR. ARVEND'S *Cases of Ligature of the External Carotid, and External Iliac Arteries.*

Cases of this kind are rapidly multiplying, and the bold surgery of England is making its way even to the barbarous regions of the North. Dr. Arvend, principal surgeon to the Hospital of Artillery in St. Petersburgh, has related two cases in the Imperial Conservator, in which he severally passed ligatures round the external iliac, about two inches below its exit, and upon the right carotid, an inch above the clavicle. Both operations were successful. Both patients were about the same age of forty-four. The ligature of the iliac canal came away on the sixteenth day, that of the carotid on the seventeenth.

(*Salzburger Zeitung, Med. und Chir*).

29. MR. TRAVERS'S *Case of the Ligature of the Subclavian Artery.*

In a patient, upwards of sixty years of age, in St. Thomas's hospital, Mr. Travers, assisted by Mr. Green, tied the subclavian artery, Jan. 17th, 1823. Mr. Travers made an angular incision, by letting fall a perpendicular one along the outer edge of the sterno-mastoid muscle, on the first incision made above the clavicle, and then proceeded to dissect from the flap. The great elevation of the clavicle rendered the operation very difficult, and there was a great deal of hemorrhage. The operation occupied upwards of two hours. The patient died the second or third day. (*Med. Chirurg. Mag.*)

30. M. WOLFF'S *Operation for Imperforate Anus* *.

The subject of this operation was a male infant, who came into the world of a weak form, and unhealthy hue, altogether resembling a 7th or 8th month's child. The imperfection in the anus was not discovered till the evening of the 12th day from his birth: during this time he was restless, cried much, and was at last affected with hiccup and convulsions. M. Wolff, on being called in, found the abdomen protuberant, hard, and painful to the touch; there were also nausea and vomiting, with great depression of strength. He instituted an examination, and discovered the cause of the symptoms. Next day he performed the operation by pushing in a large lancet into the middle of the perinæum, a few lines distant from the os coccygis, he passed it an inch deep towards the sacrum without meeting with the rectum. After stopping the bleeding he renewed the puncture, but without effect, although nearly two inches deep. He felt, however, the bladder through the wound, and also the hypogastric arteries pulsating. He had now recourse to a pharyngotome with a bent and somewhat broad tube. This was pushed fully two inches deep, and entered the rectum; a clyster was immediately administered, which brought away some meconium. By the use of glysters and setons retained in the wound, the child rapidly recovered, so that by the 7th day from the operation the discharge per anum followed naturally, and when seen some time afterwards it was in good health, and free from any disturbance in the functions of the rectum. In cases where the imperforation is of the kind described, Mr. Wolff prefers the pharyngotome to the trocar and lancet.

(*Langenbeck's Neue Bibliothek für die Chirurg.*)

31. M. ITARD *on injecting the Internal Ear.*

The instruments requisite to perform the injection properly, are a syringe, a silver tube, an elastic gum tube, and a silver frontlet, to be employed as its name implies. The success must depend on the anatomical skill and dexterity of the

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* Glücklich verrietete operation eines verwachsenen Mastdarmes. Vom Landchirurgus E. Wolff in Celle.

operator, and he must rely, in an eminent degree, on his habit of introducing it in the dead subject for success and facility in employing it in the living body. M. Itard fixes the frontlet first, then measures the distance between the superior alveolar margin and the basis of the uvula, which is nearly the same with that between the posterior commissure of the nostril and the guttural orifice of the Eustachian canal. This measure is to be marked on the silver tube, which is then to be introduced into the nostril on the side corresponding to that tympanum which the surgeon wishes to inject. Its entrance into the canal, which is to be known only by the most consummate *tact* acquired by the frequent habit of introducing it, both in the dead and living body, will enable the operator to fix its other extremity immoveably between the limbs of a *vis* or screw attached to the frontlet, and proceed to the adaptation of the syringe. All after this is simple and easy.

(*Maladies de l' Oreille*).

32. M. Renaud's *Case of Gastrotomy.*

A young man accidentally swallowed a silver fork, eight inches in length, in consequence of which the most threatening symptoms ensued, and the greatest alarm was entertained. Mr. Renaud, an able surgeon at Romans, (department of the Drôme,) with a view to afford the only assistance in his power to the patient, undertook the operation of gastrotomy; which he performed in the presence of several physicians of the faculty of medicine of Paris and Montpelier, and succeeded, with much dexterity, in extracting the fork. The young man is considered out of danger, and was expected to recover in a short time.

(*Tablettes Universelles.*)

33. M. Amusat *on Fracturing Calculi in the Bladder.*

This is one of the most novel of the many methods which have been proposed to get rid of calculi, without having recourse to the dangerous operation of Lithotomy. M. Amusat has invented an instrument, consisting of pincers confined within a tube, not larger than a sound; by which, when introduced into the bladder, the stone can be easily seized, reduced to powder, and voided as gravel. A stone, the size of a nut, can be pulverized in a few seconds. It has as yet been only tried on the dead body.

(*Bibliotheque Universelle.*)

34. Mr. Wishart's *successful Case of Fungus Hæmatodes of the Eye-ball.*

J. L., aged nine, was brought to Mr. Wishart, in May, 1821, having his left eye painful and irritable, with shooting pain in the orbit, vision nearly gone, cornea transparent, pupil serrated and incontractile; a yellow dusky membrane lined the whole posterior part of the eye-ball. About two months before he had got a blow on the eye, producing pain and inflammation, which were subdued, but returned. Health good. Pulse natural. In spite of every remedy, the opacity, &c. increased, and it was resolved to extirpate the eye. This was done in about four minutes, on the 9th of July. The wound healed kindly, and he continued well on the following July. The dissection of the eye-ball showed the same appearances, which are described by Mr. Wardrop in his work on Fungus Hæmatodes, with this difference, that the optic nerve was quite healthy—a circumstance which Mr. Wishart justly thinks is indispensable to success. The earlier in the disease the operation is performed the better.—(*Edin. Surg. Jour.*)

35. M. Grafe's *Excision of the Lower Jaw.*

Professor Gräfe, of Berlin, has removed one half of the inferior maxilla from its articulation; in consequence of which operation, it became necessary to apply a ligature to the left carotid artery. The patient was a girl twenty-three years of

age, who had had a bony tumour situated on the jaw ever since she was six years old, which had then grown to an enormous size. The patient supported the operation with great fortitude. The wound was dressed on the fifth day, when the patient was not only able to utter some words, but to take food without great difficulty. (*Salzburger Zeitung*).

VI. PRACTICE OF PHYSIC.

36. DR. HEYTING'S *Case of Chronic Inflammation of the Pancreas.*

A woman, aged thirty, pale, thin, and subject to profuse perspiration, applied to Dr. Heyting in May, 1820. She had been safely delivered two months before of a healthy child; but had afterwards been seized with a violent fever, which still continued. She was affected with a profuse and disagreeable salivation. Her mouth and throat were natural, so that the cause of this salivation was not in the salivary glands; but as there was occasionally found in her stools matter similar to that of the salivation, it was thought it might come from the primæ viæ. She had immoderate thirst, but no liquid would remain on the stomach. The perspiration was so abundant, that the bed-clothes had to be changed five or six times a-day. She had regular evening exacerbations of the fever. There was also acute pain of the left side, with dry cough, palpitations of the heart, and a feeling of oppression and uneasiness about the stomach. The abdomen was soft, though considerably tumified. The urine was scanty, with brick-dust depositions. Dr. Heyting decided from those symptoms, that the source of the disease lay in the pancreas, and prescribed the following draught:—

℞. Acidi muriatici oxyg. .. ℥j;
Mucil. Gum. Arab. ..... ℥ij;
Aquæ Canellæ sine Vino. ℥v.
Tinct. Thebaic. ..... ℈ss.
Sacchari Albi q. s. M.
Capiat coohleare unum quaque hora.

This prescription was successful; for in eight days the salivation, the diarrhœa, and the perspiration abated. The dose was gradually augmented, and followed by tonics, and the cure was completed.

(HUFELAND'S *Journ. der praktischen Heilkunde.*)

37. MM. RIBES *and* DUPRE *on Sulphate of Quinine in Neuralgia.*

In Neuralgia, complicated for the most part with intermittents of several varieties, MM. Ribes and Dupre appear to have been successful in the exhibition of this new medicine, the sulphate of quinine. One of the formulæ employed by Dupre, was the following:

℞. Sulphatis Quininæ gr. viij;
Syrupi Rhei.
Aquæ floris Aurantii ... ā ā ℥ij ℥iv.
Ætheris Sulphurici gutt x.
M.

The patient took three doses a day, and the sulphate of quinine was increased each consecutive day. (MAGENDIE, *Journ. de Physiologie.*)

38. M. Schlegel *on Moxa in Phthisis.*

We are quite convinced that moxa, or in other words the actual cautery, has no specific powers of counter-irritation which may not be obtained by blistering; yet as it gives variety to the usual routine in common cases, it may perhaps be tried when patients will submit. M. Schlegel has successfully applied the moxa in phthisis, and particularly in a female, aged thirty-two, in the last stage of the disease who was cured in two months. We must confess that we are rather sceptical as to this case.—As a substitute for moxa, since substitutes are so much the rage, why might not Dr. Chisholm's boiling water blister be tried?

(Hufeland's *Journ. der praktischen Heilkunde.)*

39. Dr. Chapman *on the Internal Use of Lead.*

In one of our last numbers, we alluded to the use of the saccharum saturni in several of the affections of the bowels. We have for many years occasionally employed it both in cholera infantum, and dysentery, though never to the same extent, or with as much success, as during the present season. These two diseases have prevailed in this city in a very unusual degree for the last month, which has afforded us ample opportunities of testing the powers of the medicine. Evacuations having been premised, by venesection and purging, we have found no one remedy more effectually to relieve tormina aud tenesmus, to correct the morbid secretions of the intestinal tube, to allay febrile excitement, or to conduce to the comfort, and general improvement in the condition of the patient. These remarks apply especially to dysentery, though in the cases of cholera infantum approaching the same character, we have derived nearly equal advantage from it. To an adult we give half a grain to a grain of the lead, with five drops of laudanum, every hour or two, according to the urgency of the symptoms, either in solution or pill. In some instances, where we were desirous of acting on the surface, we have added a small portion of ipecacuanha, with utility, to the preceding prescription. It meets exceedingly well this particular indication, without at all impairing the specific properties of the lead. In the progress of some protracted cases, it will be necessary about once in the twenty-four hours, to intermit this course of treatment, in order to interpose some purgative, to remove any foul accumulations, which may take place in the bowels. By whom this practice was originated we know not with certainty. It has been vaguely spoken of, and we suspect, as loosely tried for many years among us. We have, however, reason to believe that the credit is due to Dr. Irwin of Charleston, South Carolina, one of the most intrepid, original, and accomplished physicians of our country.

The intermittent fever, which so widely prevailed during the last autumn in the neighbourhood of this city and elsewhere, has again recurred, and, for the most part, with great obstinacy. In many instances, it is attended with a singularly irritable stomach, so as to preclude the use of bark, and the ordinary remedies. We have found such cases sometimes to yield to emetics, repeated for three successive times, on the days of the anticipated paroxysm. There is another practice which has proved very successful under similar circumstances. It is to keep the patient in bed for several days, repeating a dose of opium every six hours, so as not to allow the impression of that article to wear off.

(*Chapman's Journal.*)

40. Dr. Gimelle *on Iodine in Leucorrhœa.*

Dr. Gimelle has used Iodine with much advantage in the cure of leucorrhœa of long standing, proceeding as it does from some original irritation degenerated into a state of chronic disease. He employed a syrup of iodine in the dose of an ounce

night and morning, and friction every evening with a drachm of iodurated ointment In this practice attention must be had to the peculiar effects this medicine sometimes produces on the stomach, which are best obviated by the use of acid drinks. The composition of these preparations of iodine is not mentioned.

(OMODEI, *Annali.*)

41. Dr. PALLAS *on the Abuse of Oil in Poisoning by Cantharides.*

As oil is found to dissolve the active principle of Cantharides, Dr. Pallas justly reprehends the usual directions given for administering oil in cases where it has been given in an overdose. M. Orfila proved the truth of this by macerating cantharides in cold oil. On giving this to dogs they died in a few hours.

(Journal de Pharmacie).

42. MR. EDWARDS' *Case of Poisoning by Arsenic successfully treated with Magnesia.*

This, so far as we know, is the third case of poisoning by arsenic, which has been successfully treated with magnesia, as first proposed by Mr. Hume of Long-acre, the discoverer of the tests for arsenic, by ammoniated nitrate of silver and ammoniated sulphate of copper. (*see also* No. 47). We mention this the rather, that we observe Dr. Paris in the new Edition of his Pharmacologia, has expressly said, that "alkaline solutions and magnesia, accelerate its fatal effects by promoting its solution". He afterwards, indeed, qualifies this decision in a note, but speaks of it so doubtingly, that few, we think, would prescribe it on his recommendation.

(*Med. and Physical Journ*).

43. DR. JOHN HUME *on Tartar Emetic Ointment and Tonics in Phthisis.*

[Communicated by the Author.]

I am desirous of adding to my Remarks on Phthisis, published in the Quarterly Journal for January last, a short sketch of a case, most probably of incipient tubercular phthisis, which at present is in a fair way of terminating favourably.

G. R. a man in his 29th year, by trade a weaver, was, in April 1822, attacked with hæmoptysis. He had for some days, previously, felt himself unfit for his work, he was weak and langnid, and lost his appetite. He had a sense of oppression and weight over his chest, and a severe cough as if he had caught cold, and some pain near the lower end of the sternum. When the hæmoptysis appeared, he went to a surgeon in his neighbourhood, who took a plateful of blood from his arm, and desired him to return in a few days and lose as much more if the hæmoptysis continued. In the meantime, a Lady desired him to consult me. When I first saw him on the 25th of April, besides the above symptoms, he had feverish paroxysms occurring daily, for the most part after mid-day; his pulse was 100 and of moderate strength, his tongue rather redder than natural, and his bowels costive. His cough was very severe, and his expectoration frequently bloody, but sometimes of a purulent appearance, I ordered a large blister to be applied to his sternum, gave him a mixture which contained laudanum, digitalis, and tartrate of antimony, and to obviate costiveness the compound rhubarb pill. By the 1st of May the hæmoptysis had disappeared, but the cough was still severe, and the fever had not abated. Bowels were still costive. I now put him on the use of the tartar emetic ointment, one drachm to an ounce of lard, to be rubbed over his whole chest, and the following mixture for his cough:

℞. Mel. ʒij.;
Theriac ʒii;
Acet. Distill. ʒiiij;
Tinct. Opii... dr. i;
Aquæ..... ʒxii;
M.

Of this he was to take a table spoonful occasionally, according to the violence of the cough. I recommended also exercise in the open air, particularly the swing; and I put him upon a milk diet and animal soup, which he was enabled to procure, by the goodness of a family in whose neighbourhood he resided. Under this management he continued for a great part of the summer, with a fair promise of recovery; to which the antimonial friction certainly contributed, as he used it to a very great extent. In August last, however, from accidental exposure to cold, he had a recurrence of his hæmoptysis slightly, and for two days after its appearance he spit little round substances like pin heads, of a dull white colour, and in considerable quantity. I did not see him at that time, but he got the same pectoral mixture as formerly, and persevered with the antimonial ointment. This man has got through a very severe winter wonderfully well, his house being situated in a sheltered valley, and at present, he is almost free from complaint. His father and uncle, I am informed, died of consumption. He himself is of a fair complexion, naturally well coloured, and in short, has somewhat of a strennous appearance. His reeovery must be attributed, in a great measure, to the ointment; for certainly never mortal persevered with such ardour in the use of any remedy. His diet aud exercise were tonic, but nothing else. It is intended that, in future he shall abandon his sedentary employment, and betake himself to one that shall keep him on his legs, and more in the open air. He still uses the ointment.—I may here observe that my approval of Dr. Stuart's practice, is occasioned by conviction, and not by the partiality of friendship; for I have met him once only, since the year 1797, at which time we were both attending the Medical Society of Edinburgh.

I have had a case this winter, of a very severe cough, and particularly expectoration, with little or no fever, which terminated favourably, in consequence of vomiting being brought on, by the patient having taken too much of a compound squill mixture. The vomiting continued for some days; and was not relieved till the patient had his chest and epigastric region rubbed repeatedly with laudanum and camphorated spirit, and took a pill containing 3 grains of calomel and one third of a grain of opium every four hours, till the bowels were freely evacuated. This medicine was given in consequence of green bilious matter being vomited. The vomiting never returned, and the cough soon abated; the patient's appetite and strength very speedily returning. Previous to the vomiting, the case had a very unfavourable aspect, as the constitution, without doubt, was disposed to phthisis. To prevent misconception, I wish it to be understood, as my opinion, that phthisis, meaning, of course, scrofulous or tuberculous phthisis, may be cured by tonic remedies, if the disease be in an incipient state, and if proper precautions be employed at the same time; but that, if the disease be far advanced, no treatment whatever will cure it.

VII. MIDWIFERY.

44. Dr. Church's *Case of Ruptured Uterus.*

Mrs. D. aged thirty-six, in labour with her fifth child, was suspected on examination to have ruptured the Uterus, though there were no symptoms to indicate

this. On attempting to deliver by the forceps, lever, and blunt hook, the child escaped into the cavity of the abdomen and the patient died. On dissection there appeared extensive laceration of the Uterus, whose parietes were as thin as paper, and quite transparent. The bladder was schirrous and its parietes more than two inches thick. There were no previous symptoms of these derangements.

(*Philadelphia Journal.*)

45. M. MOSCATI *on Morbid Occlusion of the Os Uteri during Parturition.*

Occlusion of the mouth of the uterus, total or partial, may be the result of congenital malformation, or of rupture, or other injury from the employment of instruments during labour, and consequent cicatrization Such obstruction may also arise from a change of position of the uterus in pregnancy, and the impracticability of restoring to the cervix its natural direction. Baudelocque, in such a case, unable to replace the uterus, tried to form in it an artificial opening; but the woman died from inflammation. Lauverjeat, in another instance, was more fortunate; he incised the body of the uterus on the prominence announcing the situation of the head of the fœtus, and thus procured its expulsion. The woman got well; and in two months after the uterus resumed its natural situation. But the partial occlusion of the orifice from cicatrices, consequent on laborious labour, is the more frequent occurrence. A woman, aged twenty-five, had been lacerated by imprudent application of the forceps. The uterine orifice was so much contracted by the resulting cicatrix, as only to admit a fine probe. Pregnancy again ensued; and on the occurence of labour, forty-eight hours severe pain effected no sensible dilatation. Profiting by the recollection of a former unfortunate case *, Moscati was deterred from the usual mode of operating, and thought of another simple means; which consisted in introducing a slightly curved *bistouri caché* into the uterine orifice, and making slight incisons round the whole circumference of the cervix, and thus enabling the orifice to yield to the necessary extent. The incisions, practised during the labour pains, caused no additional suffering. The uterine orifice, after the patient had reposed awhile, dilated circularly and uniformly; and the child and placenta were naturally expelled. Neither pain, hemorrhage, nor fever followed, and the woman speedily recovered. Still the uterine mouth did not regain its habitual softness, but presented a hard circle; an inevitable effect of the cicatrization of the numerous incisions which had been inflicted. With a view of dilating the orifice, a wax bougie, gradually increased in diameter, was for one week introduced every day, till it could no longer be born. Eleven months after, the woman again became pregnant, and it was necessary to have recourse a second time to the bistouri to facilitate the process of paturition; but incisions, less deep than on the former occasion, were now requisite, and the operation was completely snccessful; as the woman, at the close of a third pregnancy was delivered without any such assistance (From the *Memoirs of the Italian society of Sciences.*)

46. M. VAN BUREN'S *Successful case of Cæsarean operation.*

[Communicated by Dr. Carson of Liverpool.]

Beneba, a slave aged thirty-five, in labour of her sixth child, 27th April, 1820, was found to have malformation of the pelvis, (probably arising from exostosis), sufficient to warrant the Cæsarean section. M. Van Buren, of Tortola, per-

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* In this case, incision of the uterus, necessitated by occlusion of its orifice, terminated fatally. On dissection, it was found that the uterus had been ruptured to a great extent, in the direction of the angles of the incision, by the pressure of the head of the fœtus.

formed the operation by first dividing the integuments from the umbilicus to the pubis, through the linea alba, and again the fundus uteri for seven inches, whence the fœtus and placenta were extracted. A prolapsus of the intestines occurred, but was reduced by Dr. Doty. Only about eight ounces of blood were lost. The wound was united by suture and the eighteen-tailed bandage was used. By proper treatment, she was able by the ninetecnth day to walk about the yard. She continues well up to this day, (May 29th 1822,) two years after the operation.

(*London Med. and Phys. Journal.*)

VIII.—MEDICAL JURISPRUDENCE.

47. Dr. Paris *on Tests for Arsenic.*

The high importance on unequivocal tests for substances employed with bad intent in poisoning has in our courts been repeatedly demonstrated, The admirable tests for arsenic brought to such perfection by Mr. Hume of Long-Acre, which Dr. Paris justly calls "a triumph in the art of analysis," may be misconceived or misapplied, by inattention to and optical fallacy. The ammoniaco-sulphate of copper will precipitate arsenic in the form of Scheele's green. In the celebrated case at the Cornwall Lent Assizes, 1817, it was maintained that decoction of onions will with this test, give a similar green precipitate. It will do so in a glass, but not on a bit of writing paper; by transmitted, but not by reflected light. In the case of the blue sulphate of copper seen through the yellow colour of the onions it will appear green. In the same way, the yellow hue of corrosive sublimate seen through the blue syrup of violets appears green. Dr. Poiter of South Carolina, has remarked that when carbonate of potash is added to a solution of copper in coffee, precipitate like scheele's green is produced, when no arsenic is present; but this is explicable on the same optical deception.

(*See Silliman's Journal, III.* 365.)

IX. MATERIA MEDICA, PHARMACY, and CHEMISTRY.

48. M. Magendie *on the Action of Pure Emetin.*

The action of pure emetin differs from that of the coloured only in being much more energetic. Two grains are quite sufficient to destroy a large sized dog. I have seen vomiting produced, by one sixteenth of a grain, in a man of eighty-five years of age, who, it is true, vomited generally with extreme facility.

I have for some time made use of a pill composed as follows;

℞ Sugar, ʒiv.

Pure emetin, gr. viii. to be made into pills of nine grains.

To produce vomiting, one grain of the pure emetin, dissolved in a little acetic or sulphuric acid, may be administercd in water.

The following formula may be employed:

℞ Infusion of linden flowers, ℥ iii.

Pure emetin dissolved in sufficiency of nitric acid, gr. i.

Syrup of marsh mallow,..... ..... ℥ i.

A spoonful at a dose should be given every quarter of an hour until vomiting is produced.

A syrup may be made after the following manner:

℞ Simple syrup, ℔ i.

Pure emetin, gr. iv.

(*Magendie, Formulaire.*)

49. MM. LECANU and SERBAT *on Succinic Acid in the Turpentines.*

In extracting by heat, the essential oil of turpentine from resin, obtained from the forest of Fontainbleau, MM. Lecanu, Fils, and Serbat, remarked the formation of acicular crystals, which they ascertained to be succinic acid. MM. Henri, Montillard, and Parra, have repeated these experiments uniformly with the same result.

(*Annales de Chimie.*)

50. Dr ZOLLIKOFFER *on Prussiate of Iron.*

The *Prussiate* of *iron* possesses the following advantages over the *cinchona offiscin.* as a remedy in intermitting and remitting fevers:—It is void of taste, and may therefore be much more readily exhibited, than the *pulv. cinch. offin.* which, to some, is extremely unpleasant.—It may be given in every stage of the disease; while the administration of bark is confined to the *apyrexia.*—The dose is much smaller, being from four to six grains twice or thrice in twenty-four hours; or at morning, noon and night: while bark, to be effectual, must be given in much larger doses.—It never disagrees with the stomach, or creates nausea, even in the most irritable state, while bark is not unfrequently rejected.—In its effects as a remedy calculated to prevent the recurrence of future *paroxysms*, it is more certain, prompt, and effectual, than the justly celebrated *cort. peruvian.*—A patient thus will recover from the influence of intermitting and remitting fevers, in the generality of cases, in much less time than is usual in those cases in which bark is employed.—In making use of the Prussiate of iron as a remedy in disease, care must be taken to select that which is of a very dark blue, approaching to a black, having a shining coppery fracture, and adhering firmly to the tongue.

(CHAPMAN'S *Journal*).

51. M. ROBIQUET *on the Oil of Bitter Almonds.*

It has been long known that the oil of bitter almonds rapidly crystallizes when exposed to the air; and as M. Vogel discovered, the crystals have not the peculiar odour of the oil. M. Robiquet has proved that these crystals possess none of the properties of the volatile matter which escapes, and that they are of the nature of an acid, as they redden turnsole paper and unite with alkalies. They possess none of the poisonous properties of the volatile oil, as was proved by M. Villermé, who assisted in the experiments. (*Annales de Chimie*).

52. MR. BRANDER *on coagulation of Salep by Magnesia.*

Twenty grains of salep dissolved in four ounces of water, upon thirty grains of magnesia being added, will become in a few hours solid and jelly-like, and will keep for weeks without becoming putrid. The jelly is insoluble in water, fat oils, oil of turpentine, alcohol, or caustic potash. It is partly dissolved by acids, leaving a bulky opalescent residue. The magnesia does not affect albumen, jelly, or starch in the same way. Nor is the same effect produced on the salep by lime.

(*Annals of Philosophy.*)

X. BOTANY.

53. M. THEODORE DE SAUSSURE *on the Oxygen absorbed, and the Heat evolved by Flowers.*

By a number of observations and experiments, M. Saussure has discovered some very curious facts connected with the blossoming of plants. Flowers, he found, to consume a much greater quantity of oxygen than the rest of the plant, and in a medium deprived of oxygen, flowers will not blossom at all. Leaves, on the contrary, contain so much oxygen, that when deprived of it they can form a proper atmosphere for themselves. The portions of oxygen absorbed by the flowers, and the

leaves were in *Cheiranthus incanus* 11 and 4; in the double 7.7. and 4; in the *Polyanthes tuberosa* 9 and 3; in the double 7.4 and 3; in the *Passiflora serratifolia* 18.5 and 5.25; in *Cucurbita melo-pepo* (Male flowers) 12 and 6.7; (Female flowers) 3.5 and 6.7; in the double flowers *Tropoleum majus*, 7.25 and 8.3; in the single 8.5 and 3. It follows that simple flowers of equal volume, consume more oxygen than double flowers of the same kind; it is to be remarked also, that simple flowers fade much sooner than double ones. It appears also that, it is at the moment of fecundation, that the greatest quantity of oxygen is consumed; and that the stamina adhering at their base, and to the receptacle, consume more than the other parts of the same flower.

The heat evolved in the spathæ of several species of *Arum* was first discovered by Lamarck, and confirmed by Sennebier (*Phys. Veg. III).* Hubert found that five spadices of *Arum cordifolium* gave 44° R. when the air was only 19° R. (*Journ. de Phys.* 59. p. 280). Saussure found that this phenomenon is not confined to the Arums, though it is in them most remarkabe. He is inclined to account for it in part, by the rapid destruction of oxygen, or its combination with vegetable carbon at the time of fecundation, which in some of the Arums, he found to be more than thirty times their own volume of gas in twenty-four hours; and in other flowers, their heat was found, in most cases, to be in proportion to the quantity of gas destroyed. On the contrary, some flowers are colder than the air, in consequence of their evaporation; and sometimes, in warm flowers, a fallacy arises from their moisture adhering to the bulb of the Thermoscope, and thence evaporating. That the absorption of oxygen, however, is not the only cause of heat, appears from the Bignonia radicans, which, though a warm flower, consumes less oxygen than the *Passiflora serratifolia* which is a cold flower.

(*Mem. Soc. Phys. et Hist. Nat. Geneva.*)

54. Lindley, *on the effect of climate on Rosa Canina.*

It is well known that dogs almost lose their hair in some tropical countries, while in the colder regions of the north, the usual hair is thickened at the roots by a close shag or wool. A similar fact is observed in the common Dog-Rose (*Rosa Canina*) the setæ or bristles of which, are in some northern countries abundant, while in Egypt and Madeira they wholly disappear.

(*Monograph of the Roses.*)

55. Mr. Nuttal *on the Impregnation of Plants.*

This author infers, with some ingenuity, from the experiments of Spallanzani and the reasoning of Decandolle, that vegetable impregnation may probably arise from odoriferous vapour, exhaled either from the stamens or the petals which Decandolle is disposed to consider as of the nature of stamens. One thing is certain that it is only while in the process of fecundation that flowers emit any odour.

(*American Journal.*)

XI. ZOOLOGY.

56. M. Geoffroy St. Hilaire *on a new Species of Bos.*

On the authority of Major Roughsedge, and the son of the French Governor of Mine-Pout in India, M. G. St Hilaire has given noticc of the existence of a new species of wild ox called *Gaour*, or *Gour* which is armed with "rayons epineux visibles exterieurement, et surmontant les apophyses epineuses des vertèbres dorsales." He goes on to prove the possibility of this from animals which are *desti-*

tute of the " rayons epineux ;" in the same style of fanciful deduction by which he formerly proved the shell of a crab, to be its vertrebral column* !!.

(*Seance d'Institute Royal.*)

XII. MISCELLANEOUS.

57. M. ESQUIROL'S *Account of a Colony of Maniacs, at Gheel, near Brussels.*†

From time immemorial, there has existed in the centre of Belgium, in the Commune of Gheel, a colony of maniacs, of which little has hitherto been accurately known by the public, or the profession, till M. Esquirol visited it in 1821. The first public notice which we find of them is in 1803, when the Prefect of Dyle caused all the maniacs kept in Brussels to be taken to Gheel, as they were badly accommodated in the hospital at Brussels. The following year, a short notice of the state of Gheel, was inserted in M. Herbouille's Statistical Account of the District; in which, he says, that this " Strange traffic has been time out of mind the only resource of the inhabitants of Gheel, and no accident from it was ever known to have taken place." Dr. Andrée is the next writer who mentions Gheel, in his work on Charitable Establishments, published in 1808. He was informed, that madness is endemic at Gheel! adding, that he had not time to examine " Ilo fondamento di questa voce popolare ;" but if it be true, it will be be an interesting physiological phenomenon. A still more erroneous account is given by M. Jouy, in the third volume of the " Hermite de la Chaussé d'Antin." Even the Geographical Dictionary of the Pays Bas copies verbatim, Herbouille's Statistical account.

On the 29th of August, 1811, M. Esquirol went to Gheel, accompanied by Dr. Vaisin and M. Vanetzbon, director of the Belgic Mint, who undertook the office of Flemish interpreter. He remained two days, walking about the village, visiting the inhabitants, and investigating the peculiarities of this singular establishment. The small town of Gheel, is situated on the north angle of a triangle, formed by Anvers, Malines, and Gheel, and with some hamlets and farms in the vicinity, contains about six or seven thousand inhabitants, of which four or five hundred are maniacs. It has only a single street, which is broad and paved : the houses are well built, but have generally but one floor. He met a maniac in the street, who was polite enough to conduct him to the parochial church, the hospital, situated near the centre of the town, and to the church of St. Amanzius; whose architecture bespoke it to be of the thirteenth or fourteenth century. Here is the shrine of St. Nymphna the Martyr, whose bones were miraculously discovered in the seventh century, and to whom the Colony seems to owe its existence ; for it being discovered that St. Nymphna had the peculiar power of curing maniacal distempers, her shrine was soon crowded with devotees. Maniacs were accordingly brought thither in great numbers, accompanied by their relatives, and the inhabitants found it lucrative to board and lodge the strangers.

St. Nymphna still continues to enjoy her celebrity for the cure of mania, but her credit is, as might be expected, rather on the decline ; for the old rector, who is upwards of seventy, admitted, that though he had frequently seen cures effected by the intercession of the Saint, yet these were becoming daily more rare. To

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* *Quart. Journ. For. Med.* III. 23.

† Notizie sul villagio di Gheel. Del Signor Esquirol. (Lette all'Accademia Reale di Medicina).

[We have not seen the French Paper whence the Italian one is taken.–EDITOR.]

obtain a cure in this way, a very great number of minute, tedious, expensive and absurd ceremonies must be gone through, which it is unnecessary to detail. The following facts are more interesting:

The relatives of the patients intrust them to the inhabitants of Gheel, under a sort of contract. The vicinity of the church is in most request for patients, though some are lodged in the neighbouring farms and hamlets; but M. Esquirol met with few beyond the town. Each inhabitant may take from one to five patients, and for the poor of the Commune an hospital is provided, in which eight or ten are received. The patients, who are mischievous or unruly, sleep apart upon straw, or on a bag of chopped straw. Those who are more harmless have similar beds to their hosts, and eat at the same table; and of course, those in town, though they have not so good air, have better food and better beds, than those lodged in farms and hamlets. The patients maintained at the expense of the hospitals of Brussels and Malines, are clothed in woollen stuff; the others, according to the fancy of their relatives. The greater part of them live, like the other inhabitants, on milk, butter, and potatoes. They are allowed to walk in the street, or in the country, without restraint, without fear, and even without being mustered. When they escape beyond the territories of the Commune, they are pursued by the gens d'armerie, and conducted back to their homes. When any of them become unruly they are loaded with irons, both on the hands and feet; and M. Esquirol saw one poor fellow walking in the street with his legs much lacerated by the friction of his irons. Many of them are employed to the great advantage of their hosts, in agriculture, and other simple labours. The female patients are all employed in sewing and making lace, and are exempt from all domestic services. A very small remuneration is given for such services, such as a flask of beer on Sundays, &c. The patients are not allowed to go to the parish church, but fifty or sixty of them assist in singing, and in various parts of the service, at the church of St. Amanzius. Sometimes they will interrupt the service, but this is rare. The order of the police prescribes that none of the patients must be seen out of doors after sun-set, and that none who are furious be seen out at all. Charities pay from two to three hundred franks per annum for each patient; families pay from six to twelve hundred francs.

The administration of Brussels maintains a director at Gheel, who has officers under him, forming, with two physicians, a commission of surveillance; pregnant female patients are sent to Brussels, but this rarely occurs, being only in the proportion of five in ten years. He learned from Dr. Backer, who has practised at Gheel for thirty-two years, that the patients are generally incurable; suicides are rare; thirty years ago a patient cut his throat in the church, during the nine days ceremony for his cure. There are more cures made in the suburbs than in the town, though it is remarkable that the patients are worse treated.

Among the most prevalent causes stated by Dr. Backer, are religious melancholy, deluded ambition, unsuccessful love, and domestic misfortunes. The most hopeless cases are those arising from religious causes. Intermittent mania is frequently cured, when the patient can be induced during the sane intervals to engage in rural labours. Monomania is sometimes successfully treated with neutral salts in aqua graminis. Vinegar is thought useful in restraining fury. The mortality among the patients is a little more than that of the other inhabitants; the females in particular, are subject to a diarrhœa of black bilious matter, which often proves fatal. These two last years, the number of patients has been about 400, the females being nearly in the same proportion as the males. About 3-4ths of the whole have full liberty to go and return at their pleasure; and they are never crowded round and tormented by the children, as would be the case in other places, and the inhabitants live in the midst of them with perfect security. M. Esquirol has transmitted proposals to improve the establishment at Gheel, to the minister of the interior of Holland, and we only wish that these improvements, if adopted, may not be—as has too often occurred in such cases—changes for the worse.

58. *Death of Frank.*

Dr. Ceresa of Vienna has published an imperfect tribute to the memory of this distinguished physician in Omodei's Annals. John Peter Frank, Counsellor of State and Commander of the Constantinian Order of St. George, was born in 1745 at Rotalben, in Baden-Boden, of parents employed in agriculture. In his youth he gave promise of splendid vocal talents, and it was only by the interference of his patron, General Dreger, that he escaped the misfortune of being sent to Italy, to qualify him for a *soprano*, according to the wishes of the Margravine of Baden. Under the same protector he devoted himself to the acquirement of Latin at Baden, and in 1759 began to cultivate philosophy at Metz and Pont-á-Mousson. At the end of two years he applied himself directly to the study of medicine, first at Heidelberg and afterwards at Strasburgh, where he graduated in 1763.

In 1769 he became physician to the Court of Radstadt; in 1772 he practised at Bruchsal, and became Archiater to the Prince-Bishop of Spires; it was there that in 1779 he distinguished himself by the publication of the first volume of his Medical Policy, on a new and peculiar plan. In 1784 he occupied the chair of practical medicine at Göttingen, and the year after succeeded the celebrated Tissot in the clinical professorship at Pavia. He soon after published a Collection of Medical Essays, in which, besides some productions of his own, were included some of the most novel and important that had appeared in Germany.

In 1786 he was named Director of the Hospital at Pavia, and member of the Royal Patriotic Society at Milan; afterwards Proto-Medicus and Director General of the Medical Department of Lombardy; and lastly, Effective Government Counsellor, with the superintendance of the Austrian Military Hospitals in that quarter. In 1792 he presented to the world his most useful work—"Epitome de curandis Hominum Morbis" *(see Quart. Journ. for* 1822*)*. In 1795 he was recalled to Vienna as Effective Royal Aulic Counsellor, Director of the principal Hospital, and Professor of Clinical Medicine, In 1804, at the solicitation of the Emperor Alexander, he, together with his son Joseph, repaired to Wilna. Having established the Clinical School there, he proceeded at the end of eight months to accomplish the same object at Petersburgh, and remained there until 1808, when the state of his health compelled him to retire to Vienna, with the reward of an annual pension of three thousand roubles, and the title of State-Counsellor. There he confined himself to the practice of medicine, chiefly as a consulting physician, refusing even the distinguished employments offered to him at Paris by Napoleon, for the purpose of completing his works, particularly those classical ones already mentioned, In 1802 appeared his auto-biography.

On the 24th of April, 1821, he paid the debt of nature, dying of an apoplectic seizure in his 77th year. To the last, says Dr. Ceresa he displayed perfect tranquillity and immutable affection to his numerous pupils and friends; leaving however the hope of seeing his powerful genius still to shew itself in the presence of his able descendant Joseph Frank. (OMODEI. *Annali.*).

59. *Dr. Jenner.*

This celebrated discoverer of vaccination was cut off suddenly by an attack of apoplexy, on the 21st February, 1823, in the 74th year of his age. It is probable that his devotion to the study of Natural History, which is, we think, rather too much neglected by the profession, led him to his great discovery. His experiments on vaccination were begun in 1797, and published in 1798. He was the pupil of John Hunter, from whom it is to be thought he derived his taste for Natural History. He was buried in the chancel of the parish church at Berkely. We understand that Dr. Baron, of Gloucester, who attended him in his last illness, is to become his biographer and editor of his unpublished MSS. which are said to be numerous. The Work could not have fallen into better hands. A subscription for a public monument to his memory is now making, and we are certain it will be ample.

60. *Death of Dr. Pett, of Clapton.*

Too much caution cannot be enjoined as to post mortem examinations, and in this point of view, we think, our readers would do well to peruse M. Gaspard's experiments on the absorption of putrid substances. (*see Magendie's Journ. Janvier* 1823, *and Quart. Journ. For. Med.* xiv. 223). Dr. Pett, we are informed by Mr. Travers, assisted a medical friend in examining the body of a lady, who died of peritoneal inflammation after child-birth. Twelve hours after, he complained of pain in the middle finger of his right hand, where a slight superficial wound was discovered. This was first touched with caustic, and afterwards with strong sulphuric acid, but he did not feel either of the applications. A second application of the lunar caustic produced intense pain. This was followed by severe rigor, and the pain spread with increasing agony along the arm. He passed a sleepless night, and in the morning his finger was white and without sensation, and his countenance alarmingly altered. The arm went on to swell, the superficial absorbents appeared inflamed, the pectoral and axillary region became much affected, the finger put on the appearance of gangrene, and there was high nervous excitement generally. The unfavourable symptoms rapidly increased, and notwithstanding every means of remedy, he sunk in 105 hours after the injury. On examination, the chest and abdomen were found healthy, the heart rather large and flabby, and the liver considerably deranged by a chronic affection.

61. *Hunterian Society.*

On Wednesday, February 6th, the Anniversary of this Society was held at the Society's room, Aldermanbury, when the following Members were elected Officers for the ensuing year:—

President, Benjamin Robinson, M.D. Vice-Presidents, William Babington, M.D. F.R.S.; H. Lidderdale, M.D.; Sir William Blizard, F.R.S.; Benjamin Travers, esq. F.R.S. Treasurer B. Robinson, M.D. Secretaries, J. T. Conquest, M.D.F.L.S; William Cook, esq. Council, Thomas Callaway, esq. W. D. Cordell, esq. John Dunston, esq. F.L.S. H. Greenwood, esq. John Winstone, esq. H. Hawkins, esq. J. C. Knight, esq. Lewis Leese, esq. Eusebius A. Lloyd, esq. J. Miles, esq. B. C. Pierce, M.D. and J. Roberts, esq.

On the following day the Members and Friends of the Society dined together at the London Tavern; on which occasion Dr. Robinson took the chair. The report of the progress of the Society, and the state of its finances, is encouraging.

62. *London Medical Society.*

The 50th Anniversary of this Society was held on the 8th March, when the following Officers were elected:

President, Dr. Shearman. Vice Presidents, Dr. Clutterbuck, Dr. J. G. Smith, Mr. Andree, and Mr. Callaway. Treasurer, Mr. Andree. Librarian, Dr. Hancock. Secretaries, Mr. Pettigrew, and Mr. Callaway. Secretary for Foreign Correspondence, Dr. Henry Blegborough. Council, Drs. Walshman, Blicke, Blegborough, Copland, Stewart, Harrison, Martin, Uwins, Merriman, James Johnson, Hopkinson, Messrs. Ashwell, Winder, Rees, Sutcliffe, Drysdale, Box, Johnson, Dunlap, Kingdon, Ward, Taylor, Brown, Clarke, Lake, Egerton, Lloyd, Forster, Handy, Wray, Edwards, Leese, Skair, Ware, and Powell. Orator in March 1824, Dr. John Gordon Smith. Registrar, Mr. James Field.

One Dissertation only on the subject of "Dropsy," proposed by the Society last year, having been sent in for the Fothergillian Gold Medal, the Society considered it probable that, in consequence of the recent establishment of this prize, it had not been made sufficiently public to the Medical Faculty: the Society therefore deferred the adjudication of the Gold Medal for the subject of "Dropsy" to another year.

The Silver Medal, offered by the Society, for the best Essay or Essays read before the Society within the year, written by a Fellow, was adjudged to Dr. Clutterbuck, for some valuable papers that he had presented to the Society during the year. The subject of the Essays for the Gold Medal of the ensuing year, is 'Diseases of the Spine.' Mr. Grainger delivered an excellent Oration on the Brain; after which the Society dined together at the London Coffee House, Dr. Uwins in the Chair.

63. MR. COLE'S *improved Spring Truss.*

Several of the objections usually made to Trusses on the common construction, are ingeniously obviated by the improvements of Mr. Cole, the pressure on the ring being rendered more equal; and what is more, the different attitudes of the body are made to adjust the Truss without the least trouble or inconvenience to the wearer. We can confidently recommend this instrument as a valuable improvement.

64. *Dr. Marcet.*

It is the lot of very few to be so much beloved as Dr. Marcet so universally was by the profession, of which he was one of the most distinguished ornaments. It is, perhaps, still rarer, that the two heads of one family should stand so respectably with the scientific and literary world, as in the instance of Dr. Marcet and his accomplished wife, now well known to be the author of the admirable "Conversations on Chemistry, Natural Philosophy, and Political Economy." Dr. Marcet was most active both in forming and in supporting the Medico-Chirurgical Society, whose valuable labours are too well known to require our praise. Dr. Marcet died in London, in October last, at the age of fifty-two.

65. *Edinburgh Graduation Day.*

The Graduation Day at Edinburgh, is one to which many hundreds in the profession look back with the delight of past pleasure; it often forms one of "the greenest spots on memory's waste:" hundreds more look forward to it with intense anxiety as the termination of their juvenility and studentship. We feel much pleasure in calling the attention of both of these classes to an admirable paper under the above title, in the New Monthly Magazine for March. We have seldom read a more spirited, graphic, and, at the same time, classical sketch of what must always be an interesting spectacle, though we are certain it was never before painted in happier or more accurate colours.

66. *Pathological Phrenology.*

We are glad to learn that Phrenology is at last going into tangible and practical investigations. The discovery which we have to announce regards the effects of the cerebral organs on the osseous structure:—namely, when any organ is highly developed or is in great activity, it *thins the bone* on which it impinges. A man in the Dublin Hospital, who had the organ of talkativeness so strongly active that he never ceased from talking except when asleep, happened to die; and on *post mortem* examination it was found that this active organ had rendered the bone over it as thin as paper and nearly transparent. We marvel exceedingly, that some of these very active organs do not occasionally get through the bone altogether and escape into open day: Buonaparte's organ of ambition for example. Quere, whether in such cases it might not be advisable to prevent such a catastrophe by employing the operation of trepan and removing a portion of the bone-thinning organs?

Critical Characteristics of New Books.

I.—*Pharmacologia: Comprehending the Art of Prescribing upon fixed and scientific Principles; together with the History of Medicinal substances.* *By* J. A. Paris, M.D. F.R.S. F.L.S. Fellow of the Royal College of Physicians, London and Edinburgh. *Fifth Edition.* 2 vols. 8vo. London 1822. Price 25s.

This valuable work, so well known to the profession, has, in this edition, been very considerably enlarged by numerous important experiments and practical details. As a literary performance, it is full of erudition and curious researches, and written in a fascinating and purely classical style. As a practical work for daily reference and consultation, it is accnrate and philosophical; we had almost said, that it is the only Work on the Materia Medica, which does not recognize empirical prescription, but proceeds rigidly on scientific principles, so far as these have been hitherto ascertained by experiment and observation. We regret, however, to see that Dr. Paris is following the same course as Mr. S. Cooper and others, in adding and changing so much in every successive edition, that the previous edition becomes comparatively useless, and must be displaced by the new one, at an expence, which the greater number of purchasers grudge more than they would do twice the sum for a Work altogether new. This is a very great inconvenience. We recollect since this very book was in the form of a small 12mo. and sold, we believe, at 5s. It is now magnified, in this 5th Ed. to two goodly octavos at 25s.

II.—*A Description of the Human Muscles, with their several uses and the synonyma of the best authors, by* John Innes; *with Notes Practical and Explanatory.* By Robert Hunter, Lecturer on Anatomy and Surgery, and M.F.PH.S. Glasgow. *Illustrated with eighteen new Engravings of the Muscles.* By W. H. Lizars. New Edition. pp. 180. 12mo. London 1822.

This is the best edition we have seen of a very useful book. The notes are intended to point out "the relations which the muscles bear to each other, in position, and still more their connection with important blood-vessels and nerves." The Editor has studied, he says "to be at once brief and correct" in explaining what is most worthy of the student's attention as a practical and surgical anatomist. We can assure our readers that Mr. Hunter, who is a very promising young Anatomist, has executed his task with ability and care.

III.—*Memoir of the Life and Writings of* John Gordon, M.D. F.R.S.E. *late Lecturer on Anatomy and Physiology in Edinburgh.* By Daniel Ellis. F.R.S.E. &c. 12mo. Edinburgh. 1823.

This is an exceedingly interesting account of the short but splendidly promising life of the late Dr. Gordon, by a gentleman whose chemical and physiological experiments rank him high in the republic of science, and who enjoyed his intimate friendship. We cannot give details; but we recommend it strongly to our readers, particularly to those who are but beginning their medical career; for we know of

no stimulus which will produce the *ardor studendi* more than the biography of such promising young men as Dr. Gordon; and without this *ardor studendi*, no real eminence can ever be reached, be the powers of genius what they may.

IV. *Somatopsychonoologia, showing that the proofs of Body, Life, and Mind, considered as distinct essences cannot be deduced from Physiology, but depend on a distinct sort of evidence, being an examination of the controversy concerning Life, carried on by MM. Lawrence, Abernethy, Rennell and others.* By Philostratus. Ipse et Persona. pp. 116. 8vo. London. 1823.

"Q. What is Somatopsychonoology? A. It is the doctrine of the three zoopoiëtic constituents." So says our author (Page 102) and we would infer by legitimate Logic—though our author seems to be no friend to any sort of legitimacy (P. 89 Note) that he has had his "vitality modified" or mystified by the organ which when discovered "was called by Dr. Foster mysterizingness" (P. 88). Dr. Foster, in our humble opinion would have been better employed on the "Brumal Retreat of the Swallow," or in observing "Atmospherical phenomena" than in coining so barbarous a word. Our author is of course a great admirer of Dr. Foster, and Spurzheimism, and Percy Bysshe Shelly, and Horne Tooke's Etymologies, and water drinking, and vegetable diet, and all sorts of outré things and opinions (P. 87, Note). He has discovered therefore that Dr. Paley was a bad anatomist, and a bad reasoner because (mark it), he "was known to be an extravagant gourmandiser," and "often ate a whole shoulder of mutton at one meal" (p. 86. Note). If this be true, we recommend the author to confine himself most rigidly to vegetable diet, which, as he avers, "clarifies the intellect" and gives rise to "those piercing and ethereal coruscations of genius which the late herbivorous Percy Bysshe Shelly displayed" (P. 87. Note). The author for what we know may be anatomist enough, and physiologist enough to criticise Paley; but he is sadly out of his depth in his present *esquisse*. When he has ate his cabbage and sipped his water for a month, we recommend him to a perusal of *our* defence of Mr. Lawrence (*Quart. Journ. No.* 14). and our critique on Abernethy's Phrenology in the same number, and let him answer them if he can with his 'clarified intellect and his coruscations of herbivorous genius'.

V.—*Pharmacopœia Imperialis: sive Pharmacopœiæ Londinensis, Edinburgensis, et Dublinensis, Collatæ; cum Notis Anglicis, Decompositiones Chemicas exponentibus.* pp. 255. 12mo. Londini, 1823. price 7s.

"The design of the PHARMACOPŒIA IMPERIALIS is to give a comparative view of all the formulæ in the last Editions of the three Pharmacopœias, with a brief explanation of those processess in which the chemical changes produced are most worthy of remark. The Latin text has accordingly been preferred, and the corresponding formulæ have been successively arranged, so as to afford the best means of comparing them. In selecting among several methods of accomplishing this design which were suggested, it was finally resolved to follow the plan of the London College, and to insert the formulæ of the Edinburgh and Dublin Colleges in their proper places conformable to this method. The Chemical Remarks have been made as short as was judged to be consistent with perspicuity; had these been more ample and copious, the book would have been rendered more expensive, without, perhaps, adding very materially to its value. As the Editor flatters himself that the Work is calculated to be extremely useful, particularly to students and to junior practitioners, he wishes it to be as perfect and correct as possible, and would feel highly obliged by the communication of any suggestion or corrections by which it might be improved."—*Preface.*

INSTRUMENT

For passing a Ligature round a deep-seated Artery,

INVENTED BY

Mr. WEISS, 62, STRAND, LONDON.

It is well known to the Surgical profession that the most difficult part of an operation for Aneurism is the passing of the ligature round the Artery, if deep-seated, and the extrication of the thread from the eye of the Needle after it is passed round the Artery. The following Instrument, the principle of which was suggested to Mr. Weiss by Mr. Kirby, an eminent Surgeon in Dublin, who fully explained the whole of the operation to him, will be found, it is hoped, to obviate the above-mentioned difficulties. It has already been used with success in Subclavian Aneurism by an eminent Hospital Surgeon of London, and is generally approved of by the Surgical profession.

New Broad Street, January 18, 1823.

Sir,

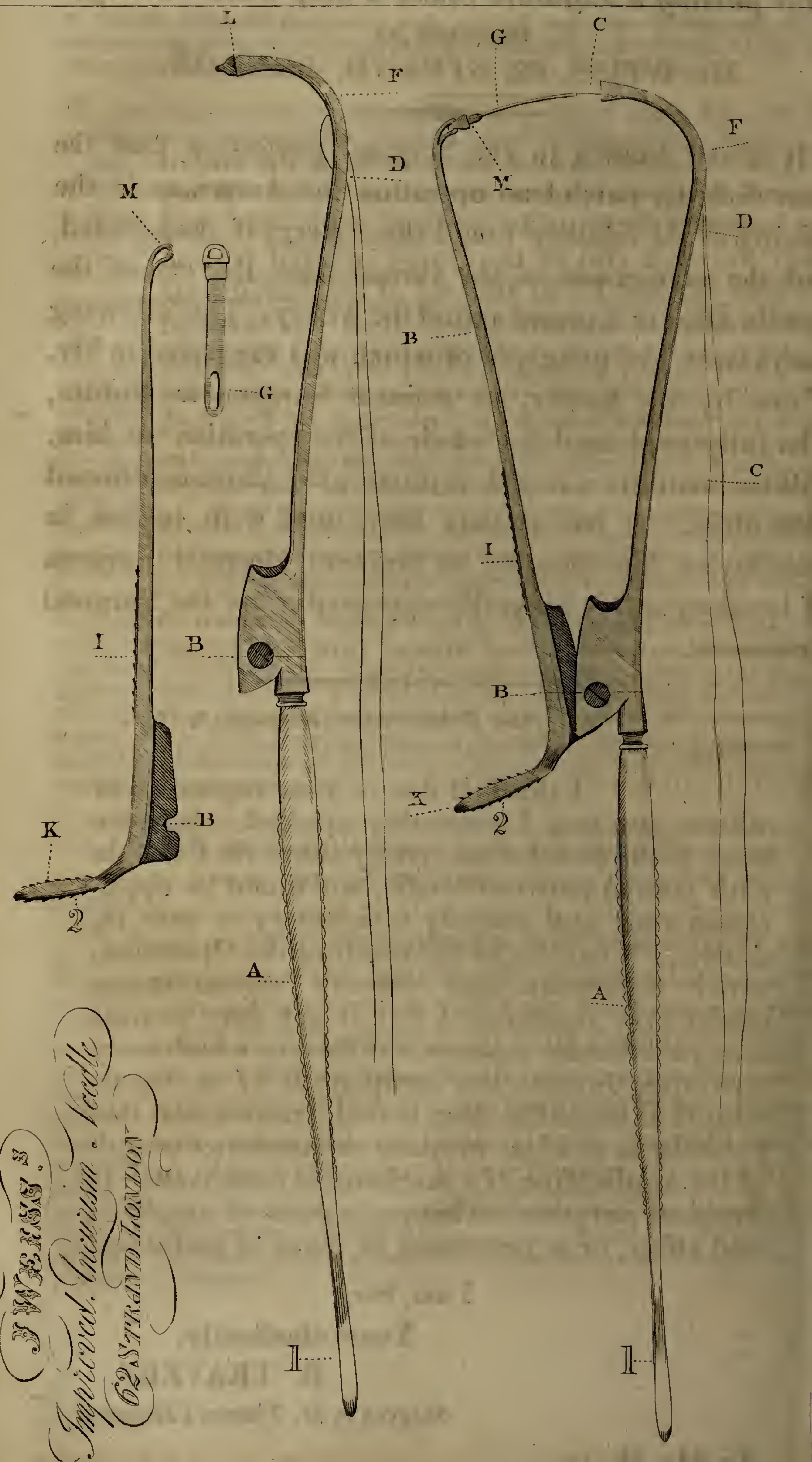
I think it due to your ingenuity to inform you that I yesterday applied a ligature twice to the Subclavian Artery above the Clavicle with your Aneurism Needle, and found its application easy and entirely satisfactory in each instance. Whatever be the result of the Operation, which unforeseen and difficult circumstances render very doubtful, I feel it my duty to state that your Needle removes a difficulty which every operating Surgeon has complained of in his attempts to noose the deep seated Arteries, and that I should be at a loss to name any modern example of the application of a mechanical contrivance to Surgical purposes, so happy in point of simplicity and effect, or so promising in point of usefulness.

I am, Sir,

Yours obediently,

B. TRAVERS.

Surgeon to St. Thomas's Hospital.


J. WEISS'S
Improved Aneurism Needle
62 STRAND LONDON
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1
C

EXPLANATION.

A (1) The Needle which has a hole in the end of it marked L, which has the spring in it. When the Instrument is to be prepared for use, you must put that end of the spring marked G into the hole marked L, at the end of the Instrument A (1) and push it quite home: then put the end of the ligature through the hole marked D, from the outside of the needle, and the same end again from the inside through the hole marked F, which is the hole in the end of the spring G; the ligature will lie on the outside of the needle as in the Plate: and is then charged and ready for use: introduce the needle thus threaded under the artery: next take the second part of the Instrument marked (2) and lead it down to the joint B, till the notch drops into the screw. Press the finger on the rough part of the Instrument marked I (2) when the point M will be found to catch hold of the eye of the spring to which the ligature is attached.

Take hold, with the finger and thumb, of that part of the Instrument marked K, and press it downwards, which process will be found to draw out the spring and with it the ligature. When the spring and ligature are drawn out, the best way to clear the one from the other is to cut the ligature away at both ends from the instrument. In order to free the spring from the second part of the instrument after the operation, it will be necessary to pull them not directly one from the other, but to give the instrument a half turn to the right in dislodging it from the spring.

As every man is at least entitled to the credit of his own Invention, and as Mr. Weiss has, with regret, been informed that insinuations have been thrown out against the originality of his Aneurism Needle, and that too, by professional Gentlemen, from whose education and habits he would have expected greater liberality, he deems it a justice to his own character to lay before the Public, the following Letter from Mr. Kirby, of Dublin, in answer to one from Mr. Weiss, on the subject of the said Aneurism Needle.

SIR,

I have at length received my parcel, and with many thanks I acknowledge your improved Aneurism Needle. I deferred my reply to you until I had an opportunity of speaking from experience of the value of the instruments. It is unquestionably a great improvement—it merits all the praise bestowed on it by Mr. Travers, and does infinite credit to your genius. Sanctioned by the approbation of Sir A. Cooper, Mr. Brodie, Mr. Travers, &c. it will soon be in the possession of every surgeon of respectability. I am obliged to you for the notice you have taken in your advertisement, of my share of the invention, and shall do you an equal justice by stating the circumstances which led to an invention of such importance.

In September last, accompanied by my friend Mr. Melin, I had a long conversation with you on the subject of an Instrument for passing a ligature round the Subclavian Artery I explained the nature of the difficulties in that operation, and told you that in Ireland I never could get an artist to take my ideas, or form any thing to my mind. You rapidly comprehended the qualities which should be combined in the Instrument, and you expressed yourself as certain you could construct one to my satisfaction. In a few days after my return to Dublin, I received by Mr. Melin, your first attempt, which I returned as insufficient, with further observations as to your future experiments, and the principles which should guide them. It is most ungenerous in any one to lay claim to the discovery, or to attempt to rob you of the reward so justly due to your labour and genius. As far as my testimony can prevail, you may use it to any weight this letter possesses—you are heartily at liberty to employ it in any way conducive to your interest, and the establishment of your right.

I have the honor to be, Sir,
Your much obliged
and faithful Servant,
(signed) JOHN KIRBY.
President of the Royal College of Surgeons Ireland.

To Mr. J. WEISS,
Strand, London.

J. Burslem, Printer, Blackfriars Road.

THE

Quarterly Journal.

N° XIX. JULY, 1823. VOL. V.

CONTENTS.

QUARTERLY HISTORY OF THE PROGRESS OF THE MEDICAL SCIENCES.

I.—ANATOMY.

II.—PHYSIOLOGY.

III.—PATHOLOGY.

IV.—MORBID DISSECTIONS.

V.—SURGERY.

*** *The variety of interesting matter, particularly in our Quarterly History of Medical Science, has induced us, in this Number, to present our readers with eight extra pages.—We shall answer our Correspondents privately.*

THE

Quarterly Journal.

N° XIX. JULY, 1823. Vol. V.

Foreign Review.

On Extirpation of the Thyroid Gland, by J. A. W. Hedenus, of Dresden, Surgeon to his Majesty the King of Saxony, &c. &c. *

The extirpation of a diseased thyroid gland is an operation to which surgeons in general are not yet reconciled. Mr. Samuel Cooper, who is an advocate for it, observes, "that it can only be attempted with prudence, before the part has become exceedingly large, and then indeed the symptoms are seldom sufficiently pressing to induce the patient to submit to a measure which is no doubt attended with a serious degree of hazard." In another place he remarks, "that bronchoceles, when not of excessive size, may be extirpated with success, is now completely proved by the experience of Desault, Theden, and Vogel, who have all practised the operation with the happiest consequences."

This language implies that Mr. Cooper knew of no instances in which the operation had succeeded, when the tumour had attained a very large size; while, as he has himself remarked, it is only when it has done so, that the patient will, in general, submit to the trial. On this account, therefore, cases which prove the possibility of complete success under such circumstances, are peculiarly valuable, although they by no means justify the surgeon in delaying the operation when the patient's consent can be obtained at an earlier period.

One of the six successful cases in which Hedenus performed this operation is very remarkable, on account of the great size

* Gräfe und Walther's Journal der Chirurgie und Augenheilkunde, Berlin, 1822.

of the tumour. This case he has given us in detail, of which the following is an abstract: He says, the danger and difficulty of the operation may be inferred from the fact that by many eminent writers it is altogether forbidden.

Wichmann in his diagnostics says, to attempt to extirpate a bronchocele, or scrophulous thyroid gland, is nothing less than literally and in good earnest to cut the patient's throat. Even Richter, who will live for ever in the esteem of every German surgeon, assured me with his own mouth that he never had done it, and that he never would undertake it.

Before I proceed to the detail of this operation, I must confess that I have never been able to perform it in less than half an hour, owing to the great number of vessels which require ligature; and certainly here the *citò* ought to give way to the *tutò et jucundè*. In the case which I have here given at length, the operation lasted an hour and a half, since I was obliged to tie no less than 63 vessels, although the arteriæ thyroideæ, superior and inferior of both sides had been previously tied, and that with a double ligature, on account of the free anastomoses. Every operator who does not in this case take the utmost precaution to spare, as much as possible, the effusion of blood, and does not tie each artery as soon as it is cut through, has no reason to expect a happy event of his undertaking; since, on account of the great number of vessels, small as they may be, which he must *necessarily* leave untied, an after hemorrhage ensues, not to be restrained by any styptic, from cold water to sulphuric acid; and this may ultimately destroy the patient, as is proved by the case of Klein's inserted in this Journal (Gräfe's Journ. 1sts Bdes 1stes Hefte)*. The advice therefore of Richter and Schmucker to tie immediately every artery which can be tied, seems to me of the highest importance.

I do not consider this caution as needlessly irksome, since in such a case it is the duty of the operator to spare nothing which can give the patient a better chance of life.

The patient, who was the subject of my second operation, was J. G. Hauswald, aged 21, a native of Dresden, by trade a house-painter, tall, thin, of scrofulous constitution; had from his infancy an enlarged thyroid gland, which had increased to the size of a skittle-ball; it covered the whole of the fore-part of the neck, extending from the os hyoides to the manubrium sterni, and on both sides pushed back the sterno-cleido-mastoidei muscles and the parts adjacent; its circumference at the base was 14 inches, and its transverse diameter seven inches. It

* See Quarterly Journal of Foreign Medicine, vol. ii. p. 370.

felt firm, was heavy and tense; the skin abounded with enlarged veins; it communicated to the hand placed on it throughout its whole extent a sense of pulsation, from which it might have been taken for an aneurismal tumour.

The swelling, which while the head was erect was very moveable, became much less so when the head was bent backward, and as it drew with it the larynx when moved, it was evidently attached to this organ. It narrowed the trachea by its pressure, so as to excite a distressing rattling respiration, with threatening of suffocation, which occurred especially on quick walking, ascending stairs or hills, during sleep at night, or while at work, as often as the patient inclined the head backward. He was received into the surgical hospital the 3d of October, 1800: from the 4th to the 6th he was ordered some doses of gentle eccoprotics, on account of the accumulation of crudities in the bowels, owing to the grossness of his ordinary food. He was enjoined mild diet. On the 8th, the operation was performed in the theatre, in the presence of more than 100 physicians and surgeons.

The patient was laid on a mattress. I considered the recumbent posture as most convenient to the operator, and comfortable to the patient. I then divided the skin in a longitudinal direction with a convex edged bistoury from the os hyoides to the top of the sternum; not being able by this means to form any flap I dissected back the skin and platysma myoides on both sides from above downwards, so as to form a flap of two inches, turned back on either side. I then saw the sterno hyroid and sterno thyroid muscles much increased in size,and firmly fixed to the whole tumour, and destitute of the usual aponeuroses: these I endeavoured, for the sake of sparing them in the operation, to dissect and separate from the swelling. Scarcely had I dissected away a quarter of an inch, when blood streamed in great quantity from numerous small arteries, which could neither be tied on account of their minuteness, nor restrained by any styptic application, since their mouths were retracted and hid beneath the strong and firm aponeurosis which invested the tumour, so that they could not be reached or withdrawn. I gave up, therefore, the attempt to separate these muscles, and came immediately to the resolution of cutting them through at their points of attachment above and below, and removing the included portions with the tumour.

We would observe, that when the cure was completed, the motions of the os hyoides and larynx remained as perfect as before, and the functions of respiration, speech, and deglutition, were unimpaired; and this was the event in four cases where I

took away portions of these muscles. I next, continues our author, separated the swelling above and below, from the sterno cleido mastoid and omo-hyroid muscles, as also from the jugular veins and carotid arteries (which were intimately connected with the tumour by cellular membranes), until I freed them as far as the point where the thyroid arteries come off: I then tied both the superior and inferior thyroideal arteries of either side, close to the tumour, and on account of the free anastomoses, used the double ligature, dividing the vessels in the space between. The deeper I carried my dissection now the more serious did the operation appear, since at every cut of four or five lines I was obliged to tie two or three arteries; and these ligatures, on account of the size of the tumour, and the deep situation of the vessels, were very difficult, and required great care.

When I had, with the greatest caution, dissected to the base of the tumour, which was firmly fixed to the thyroid cartilage, and the three upper rings of the trachea, on every side so great a number of arteries presented themselves, for the most part of the diameter of the radial or digital arteries, that I could not cut a line or two without dividing two or three of them. Under these circumstances, and as the patient, notwithstanding the speedy ligature of the arteries (effected partly by means of the artery forceps, partly by the needle and thread), had already lost a very considerable quantity of blood, I hesitated, not that I might bring the operation to a more speedy close, and spare as much as possible the loss of blood, to adopt at once the method since recommended by Brunninghausen, namely, to tie the base of the swelling, and then with the bistoury to extirpate the tumour above it. I used for this purpose a blunt pointed aneurismal needle, armed with two four-threaded ligatures, and while I directed the tumour to be pulled upward, passed the needle through the middle of its base, and drawing the ligatures through, I tied one below the other above as firmly as possible. However, that I might perfectly command the bleeding, I passed also a third ligature around the whole circumference of the swelling, and extirpated the tumour now without any bleeding from the parts included in the ligature. I now cleaned the wound from blood with a sponge, that I might see if any important vessel was yet bleeding; and as this was not the case, there being only an oozing from the small vessels of the wounded surface, I placed the ligatures over the lips of the wound, and fastened them there by means of plaster. I sprinkled the whole wounded surface with powdered gum arabic, and laid on this agaric wet with Theden's vulnerary water, and filling the remaining cavity of the wound with charpie, I brought the lips of the

wound as much as possible together by adhesive plaster; over the plaster I laid dossils of lint and compresses wet with vinegar, which were renewed every six or eight minutes, the whole was secured by a bandage.

The patient was now removed to bed, enjoined the strictest quiet; and as he required, on account of great exhaustion, some support, he was allowed some wine, with a drink of raspberry juice and water; his pulse was small and soft, about 90, while some days before the operation it had been 76 and 80. The worst symptoms two hours after the operation were difficult deglutition, smart pain in the whole right side of the head, and imperfect use of the right arm; yet neither deglutition nor the motions of the arm were altogether suspended. With these symptoms there was also frequent cough and great hoarseness. These were also the symptoms which immediately followed the 3d, 5th, and 6th operations. An emulsion was prescribed, and for common drink he was ordered gruel, broth, or linseed tea.

At four in the afternoon we observed blood flowing through the bandage, and as this, after half an hour's pressure with the hand did not abate, the whole of the dressings were removed, to ascertain whether any artery in particular was bleeding; this was not the ease however, but the blood oozed equally from all the wounded surfaee. I sprinkled the wound again with powdered gum arabie, but in plaee of the agaric I laid over the wound eommon sponge, to the thickness of the finger, seeuring the whole with a bandage as before, and two attentive surgeons were directed to make pressure with the hand. He had demulcent medicines on aecount of the eough, whieh was frequent, and might probably renew the bleeding. The night was past quietly, but for the most part without sleep.

On the morning of the 9th of October both sides of the neck were much inflamed and painfully swollen. The patient eomplained of stiffness of the neck, painful deglutition, mueh thirst, dry tongue. The pain of the head had now extended to the back of it, and the pulse was risen to 96. About two in the afternoon febrile rigours took place, sueeeeded by heat, and increased pain of the head, whieh ended, however, at six o'clock, in a gentle sweat.

11th. At nine in the morning I found the fever, pulse, and inflammation moderated; the deglutition somewhat freer; the pain of head gone; the tongue moister; thirst diminished, and cough less frequent. The patient eomplained only of great weakness, and the wound began to swell very badly, on which account I took away as mueh of the dressings as could be easily removed, and laid over the wound charpie wet with a mixture

of solut. myrrhæ c. aceto vini par. and mel rosae: He had now bark mixture, to be taken during the absence of fever.

12th. On the removal of the dressings, which were now considerably loosened, a great quantity of fœtid ichor was discharged, and several ligatures came away. About five in the afternoon there was a smart accession of fever, begun by shivering and retching, for a quarter of an hour, and followed by a strong reaction, so that the pulse at seven in the evening was from 116 to 120, hard, tense, and intermitting. The abdomen felt hard and full, and clysters, which had before been so useful, did not now succeed. I could not account for this fresh accession of inflammatory fever, without attributing it to the accumulation of morbid secretions in the intestines. I ordered him, therefore, saline purgatives, which produced five large and very fœtid evacuations, followed by remission of fever and delirium, quietness, perspirable skin, and toward morning sound sleep.

16th. On the removal of the dressings all the ligatures came away, even that which had encircled the tumour, and a very large quantity of fœtid humour was discharged. As this seemed still to ooze from the wounded surface, a graduated compress, wet with oxycrat, was applied and confined on the parts. In the afternoon there was a considerable bleeding from the place where the ligatures had been applied, which, however, by the application of sponge sprinkled with powdered alum, was easily restrained. At ten in the evening there was a return of fever, with much restless dreaming, also violent cough; on this latter account a mild opiate had been already frequently administered, and was now repeated, from which, about two o'clock, he became quiet, perspired, and toward morning slept.

From the 17th to the 24th the improvement of the patient advanced rapidly; the fever becoming daily less, the pulse sinking to 80; the appetite was increased, sleep more abundant, the strength renewed, and the suppuration more moderate and favourable.

Although the night of the 24th was passed very quietly until four o'clock, and for the most part in sleep, yet on his awaking he had violent convulsive cough, which, by its distressing agitation, produced such a considerable bleeding, that in the space of a quarter of an hour, before I could reach him, he lost above two pounds of blood, so that his life was evidently in danger. After taking away as quickly as possible the dressings, and a large quantity of coagulated blood, while I ordered sponge wet with cold water to be laid on the sides of the neck, I ascertained that the blood flowed from the upper corner of the wound. Without staying to try other means, I pressed in upon the

bleeding place a piece of sponge, wet with sp. vin. rect., filled the wound with charpie, and laid compresses wet with vinegar, not only upon the part but around the whole neck, ordering compression to be applied by the hand over the sponge; by these means the bleeding was restrained. After this great loss of blood, the strength could not but be much reduced, of which the deadly paleness of the whole body, the languid eyes, dimness of vision, the scarcely perceptible pulse, the coldness of the whole surface, the inability to hear or speak, and the general prostration, were evident and painful proofs.

Since my own experience and that of others had taught me, that when profuse bleeding, especially in a subject already debilitated, has produced great sinking, powerful nutriments and stimulating medicines frustrate the end for which they are used, because the organs are too weak properly to digest and assimilate them, and because they excite the circulating system too much; so all the tonic medicines, and the nutrient diet previously employed, were now omitted, and he was ordered, with the strictest rest and quiet, simple veal broth, milk and water, or egg soup, to be taken lukewarm, since all cold drinks excited cough; he had also a simple and very weak decoction of bark in small doses. The cold application to the neck was renewed every eight minutes. Has occasionally an opiate at night, which relieves his troublesome cough.

28th. The wound continues to improve in appearance, the purulent discharge is thicker and more moderate in quantity, the dressing when removed being dry. The fever is not appreciable, pulse 70; appetite improving. He has now returned to the nourishing diet. He continued gradually to improve. The cure was completed on the 18th, and he left the hospital sound on the 24th.

The extirpated tumour was found to consist of a structure resembling the muscular, interwoven in all directions, and invested with a strong aponeurosis; in the interior were a great number of cells, fitted with thick gelutinous matter of a dark greenish colour, and a fluid somewhat viscid. I found also in the parietes of the cyst bodies of a cartilaginous and even *bony* consistence, some of them having a crystalline appearance.

In the third case (that of Mademoiselle Portkeuler) which (excepting that after the third day from the operation there was no hemorrhage) was connected with greater difficulties than the above, since from the thyroid gland on the right side a root extended even as far as the transverse processes of the cervical vertebræ. I found also the same kind of concretions in the cells.

Among other reasons which I offer for having performed this dangerous operation six times, I may state, 1st, That I had seen a patient with enlarged thyroid gland, for which the *seton* had been employed, seized on the ninth day with dreadful tetanus, which was fatal in 17 hours; and 2d, That I cannot give any support to *setons*, or *any similar measures*, since in my examinations of enlarged thyroid glands I have almost invariably found cartilaginous or bony growth; and we cannot expect this to be removed by the use of the seton.

OMBONI ON CLINICAL MIDWIFERY *.

Passing over the preliminary observations, we proceed at once to the detail of the facts related in this work. The total number of births was 48; of which one happened in the sixth month of gestation, three in the seventh, one in the eighth, and all the rest at the natural period. The case of abortion in the sixth month was induced by the mother's striking the abdomen by a fall; in two of the seventh month cases, labour followed serious hemorrhage, resulting from a partial detachment of the placenta; in the third, it was in consequence of fatigue during a long journey; the case at eight months occurred in a woman whose pelvis was deformed; and we are told that in all these premature cases, labour had so far advanced before they were received into the hospital, that there was no possibility of checking the process.

Of the forty-eight cases twenty-four were natural, twenty difficult, and four preternatural. The cases of difficulty depended on various causes; in eight of them the subjects were robust, the os uteri resistant and undilatable; in these bleeding from the arm was practised, and repeated in some even three times; which treatment, together with the employment of oily injections into the vagina, was attended by the happiest results. In one case, the difficulty was induced by the strength of the membranes, which it was necessary to rupture artificially; in another, the same effects ensued from the premature rupture of the membranes, followed by great resistance of the os uteri, subdued in the manner already described. One case was ren-

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* Prospetto clinico dell' Istituto di Ostetricia presso l' I. R. Università di Pavia, diretto dal Signor Profess. P. Bongioanni; dal 15 Ottobre, 1820 al 15 Ottobre 1821; esposto dal Dr. G. Omboni, Assistente dello stesso Clinico.

dered difficult by the prolapse of the anterior lip of the os uteri, which it was necessary to support with the finger until the head was expelled. Two cases of prolapsus of the anterior part of the vagina required the same support. In two cases, besides some of the above-mentioned difficulties, the shoulders did not perform the usual motion in the hollow of the pelvis, from the diagonal position which they occupied at the superior aperture; so that it became necessary to employ two fingers of each hand, applied to each of the shoulders, to elevate the one and depress the other. One case was rendered difficult by the descent of the right hand on the right side of the head; and this did not admit of being remedied by pushing the hand and keeping it above the head. A slight difficulty was produced in one case, the occiput being turned to the right sacro-iliac symphysis, and the chin (when the head occupied the hollow of the sacrum, and was nearly expelled), having been forced from the sternum, the face by this means presenting with the chin directed upwards. This occurrence may be attributed to the large size of the pelvis, the smallness of the head, and the position in which it was placed, the uterus acting rather on the chin than the occiput, by that means separating the former from the sternum, and forcing it downwards. Labour was difficult in one woman, who was anasarcous, and in whom the labia and perineum were œdematous, and the uterine action so imperfect that it was necessary to excite it by dry friction of the abdomen, the application of warm cloths, and some spoonfuls of mint water. Two cases were rendered difficult by the presentation of the nates, the feet being directed towards the left sacro-iliac symphysis *, and the breech having descended into the pelvis at the time of the rupture of the membranes, so that it was impossible to push it back and extract by the feet. This, we may add, was unnecessary. Both cases ended favourably. The other complications met with, were an anterior obliquity of the uterus, the shortness of the funis, either absolute or the result of its being twisted round the child, and in one instance a reducible femoral hernia on the left side. Besides these, one case was difficult in consequence of the deformity of the pelvis, the sacro-pubic diameter ascertained by Baudelocque's compass being only three and a half inches, while the diagonal was natural; this might have rendered the forceps necessary had the child been large or full-grown; but fortunately labour occurred in the eighth month,

* We have followed the arrangement adopted by the author, but presentations of the face, breech, and feet, which he classes among difficult labours, would with us be considered as preternatural.

and the child being small, and the bones of the skull yielding, no assistance was required, although there was some difficulty, the pains being very strong, the head much elongated, and the parietal bones overlapping considerably.

Of the preternatural cases one was the result of hemorrhage, produced by the partial detachment of the placenta, which was attached to the neck and mouth of the uterus. As the hemorrhage, which had continued for eight days, threatened the life of the mother, although she was only in the seventh month, the os uteri being also soft and yielding, it became necessary to resort to artificial delivery immediately after the admission of the patient. Not being able to feel the presenting part of the fœtus, the Professor introduced his right hand, ruptured the membranes at the edge of the placenta, found the head presenting with the occiput to the right acetabulum, and terminated the labour by extracting a dead child, the toes being directed to the right sacro-iliac symphysis.

The second preternatural case was also dependent on hemorrhage, but in this, an edge only of the placenta was detached and pendent from the os uteri. Besides the loss of blood, the back of the fœtus presented, the shoulders being turned to the left acetabulum, and the nates to the right sacro-iliac symphysis. The membranes having burst before the admission of the patient, an attempt was made to turn; but the os uteri, which seemed soft and yielding, presented such resistance (it being the seventh month of a first pregnancy), as to render the introduction of the hand impossible. The hemorrhage ceased by rest, and the woman being strong, blood was taken from the arm, and oily injections thrown into the vagina, until the os uteri became so lax as to admit the extraction of the fœtus by the feet, in the same direction as in the former case.

The third case was caused by total inertia of the uterus, which appeared to depend on the patient's having received a blow on the abdomen by a fall, and also on the death of the child. The feet presenting with the toes to the right sacro-iliac symphysis, admitted of the extraction of the fœtus, and that with facility, as it was only in the sixth month and the upper part of the cranium was wanting.

The fourth case is the most important, for in it the Cæsarean operation was performed without success. The patient was 30, strong, short, pregnant for the first time, and without any striking deformity of the spine or lower extremities, although a close inspection shewed that the left hip projected, and that the left ilium was a few lines lower than the right, which produced a degree of claudication. The antero-posterior diameter

of the pelvis, ascertained by the pelvimeter of Baudelocque, was about three inches and four lines, allowing three inches for the base of the sacrum, pubes and mons veneris. The right diagonal, by the method of Gardieu, was natural, that is, about four and a half inches, the left wanted some lines. Examination by the vagina shewed nothing extraordinary. On the evening of the 7th April, the patient began to suffer wandering pains in the loins and abdomen, which continued with some degree of uterine action until the 10th; during this time nothing could be discovered by examination with the finger. A yellow gelatinous discharge then took place. The pains ceased for some hours, but returned at night with considerable uterine action; the os uteri could be felt high and contracted, although lax. In the morning of the 11th, the uterine contractions continuing with considerable pain, the os uteri was felt somewhat lower, but undilated, although apparently disposed to yield; the head could now be felt through the front part of the cervix; its position could not be distinguished. To moderate the pains and favour the dilatation of the cervix, blood was taken freely from the arm, and oily injections thrown into the vagina. Towards mid-day the head descended a little, but still remained at an extraordinary height, not having passed the upper aperture of the pelvis; the finger was with difficulty introduced into the os uteri, the head felt uncovered by the membranes, and a suture presenting, supposed to be the sagittal, the parietal bones overlapping considerably; this suture was directed from the sacrum to the pubes, rendering it probable that the head presented with its antero-posterior diameter in the sacro-pubic diameter of the pelvis; it was impossible to ascertain the situation of the occiput. Notwithstanding forcible uterine contractions the cervix remained in the same state. The patient being restless, with headache and strong full pulse, the blood-letting was repeated. As in spite of the means employed, the long continued labour and powerful uterine action, no ground had been gained at the end of the third day, it would have been dangerous to delay, and it became necessary to resort to some decisive expedient. An attempt was first made to dilate the orifice, so as to admit the application of the forceps, or even of the perforator; but after some hours trial it was given up, the dilatation effected being trifling, and the os uteri returning to its original state when the finger was withdrawn. Hence the application of the forceps or the perforator became impracticable. The incision of the orifice of the uterus would have been useless, the obstruction being situated above that point. The division of the symphysis pubis would have been indicated, if the head, instead

of presenting in the sacro-pubic diameter (which was nearly an inch deficient), had been placed in a diagonal direction, as in that case the enlargement gained by synchondrotomy would have allowed of its depression and expulsion; but in the present case, the increase of the sacro-pubic diameter required to have been gained by the operation, would have been at least an inch; an increase which all the best modern professors consider impossible without a degree of injury to the pelvis, more dangerous than even the Cæsarian operation.

That operation was accordingly performed on the morning of April 13th, in presence of the other professors who had decided in its favour, by the section of the abdomen in the linea alba, the uterus being firmly fixed in the middle. When the fœtus was exposed, its position was as had been supposed, that is, its occipito-frontal diameter was in the superior aperture of the pelvis, with the occiput to the pubes, the body being slightly inclined to the left side. The head was not impacted, and was readily extracted. The child was full grown, but dead, and beginning to putrify. The placenta was immediately and easily removed, the uterus contracted, and the wound was closed with adhesive plaster only, a small space being left at the bottom, and a small tent introduced to facilitate the escape of discharges. After the operation the patient took some laudanum and slept some hours. At noon there were vomiting and meteorismus, which were calmed by emollient injections. In the evening, although the pulse was small and not very strong, it was thought proper to take ℈viij of blood, to prevent uterine inflammation, &c., every thing taken by the mouth being vomited. No advantage ensued, the vomiting, meteorismus, &c. continuing, although the pulse was weak and soft. Copious fetid uterine discharges were obtained by injections; the lochia escaped by the vagina, and the patient did not complain of pains in the abdomen or uterus. The vomiting and meteorismus continued in spite of all remedies, and the patient died on the morning of the 15th, about fifty hours after the operation.

On examination after death, it was found that though the edges of the wound were in contact, no attempt at union had taken place; the wound in the uterus corresponded to the lower angle of the external incision. The stomach and arch of the colon were much distended with fetid gas; the intestinal tube was slightly inflamed in some places, particularly in the iliac fossa, where some grumous blood was lodged. The uterus was of the size of a child's head; the incision in it had not united, the edges being black, fetid, and slightly gangrenous; although originally made in the middle it was found directed to the left

side, probably from the unequal contraction of the sides of the uterus. The body and fundus were nearly an inch thick, the cervix being only some lines, soft and flaccid. The anterior part of the bodies of the lumbar vertebræ were remarkably inclined to the left side, although posteriorly the spinous processes were exactly in the median line; the whole circumference of the superior aperture of the pelvis was much smaller than natural; the left ilium projected, and was half an inch lower than the right, so that the abdominal aperture of the pelvis differed from its natural figure, being deeper and wider at the left and posterior part, contracted anteriorly, and the angle between the pelvis and spine formed by the projection of the last lumbar vertebræ, and not by the sacrum as usual. The distance from the anterior superior spine of one ilium to that of the other was seven and a half inches; the sacro-pubic diameter was three inches one line; the right diagonal four and a half inches; the left only four; the hollow of the pelvis was shallower than natural, but otherwise perfect; the diameters of the perineal aperture were about a quarter of an inch deficient.

From these measurements it will appear that the head did not rest on the sacrum, but on the projection of the last lumbar vertebra, and in front on the pubes, a little higher on the right side than on the left; and hence we see the reason of the high position during labour, and the difficulty of reaching the head with the finger. The necessity for the operation in this case arose from the unfavourable position of the child in a pelvis smaller than natural. Some in this country will doubt that any necessity existed. The antero-posterior diameter, three inches, would certainly have admitted the passage of the head when lessened by the perforator. The attempt to apply this instrument does not appear to have been actually made, and there is no proof that the state of the os uteri, although excluding the forceps, might not have admitted of its cautious employment.

In twenty-five cases, the child presented with the occiput to the right acetabulum; in twelve, with the occiput to the left acetabulum; and in three, with the occiput to the right sacro-iliac symphysis; two presented with the feet, in one of which the toes were turned to the right sacro-iliac symphysis, and in the second to the right acetabulum; lastly, two presented with the nates, the feet being directed to the right sacro-iliac symphysis. Of forty-eight children, four were premature, in one of which, born at the sixth month, the cerebrum was wanting, although the base of the cranium and the face were developed. A membranous bag, filled with a bloody fluid, occupied the place of the skull; the spinous processes were separated even

to the sacrum, and the spinal marrow was separated into many filiform masses. The greatest length of any of the children was twenty-one inches three lines; the least fifteen inches nine lines; the greatest weight was 12lb. of 12oz. each; the least was seven. Twenty were males, twenty-eight females. There was not any thing very remarkable in the placentæ or funes.

Almost the only accident during labour was a trifling laceration of the fourchette, excepting in a case already alluded to of anasarca. In this instance, there was almost a state of gangrene before labour, so that it was impossible to prevent a considerable laceration. One woman was affected with intermittent fever, another with rheumatic synocha, another with gastric synocha, and all recovered before labour; a fourth had been attacked by an intermittent fever with commencing anasarca before her admission. Bark and other remedies did no good; after a long hard labour the anasarca increased; with the secretion of milk acute hydrothorax appeared, and in a few days destroyed the patient. The dissection shewed, that besides a copious collection of serum, mixed with flakes of puriform lymph, the left lung contained many small vomicæ, was hepatized and indurated in many places, and bore marks of previous inflammation. Two patients were epileptic during pregnancy, though this disease had not the least influence on the labour. Five were affected with various complaints after labour; one of these suffered from a most serious nervous fever of the same kind with one recorded in a previous year, and which the professor considers identical with a puerperal fever recently described by some English writers (*Qu?* Dr. M. Hall?), which, according to them, is aggravated by blood-letting, and which commonly terminated by copious black and fetid discharges from the uterus, as was the case in the present instance. The greatest extent of the antero-posterior diameter in forty-six well-formed women, ascertained by the pelvimeter of Baudelocque, was four and one quarter inches; the greatest diagonal was four and three quarters; the least sacro-pubic diameter was three and two-third inches; and the least diagonal four and one-third inches.

Cramer on Strychnium*.

Strychnium was first prepared by M.M. Pelletier and Caventon, from the bean of St. Ignatius, and from nux vomica, both of them the kernel of the fruit of two species of the genus strychnos, a shrubby tree, growing on the banks of the Ganges, and in the Asiatic islands of Borneo, Sumatra, Ceylon, &c. It is from some other trees of this genus, as yet not very well known, that the snakewood of the old apothecaries is produced, and the upas tieuta, of which so many wonderful stories have been told. The qualities and *virtues*, as they are called, of nux vomica have been long known; and in Woodville's Medical Botany, but more particularly in Murray's Apparatus Medicaminum, the reader will find a very full account of them.

An account of the chemical qualities of strychnium will be found in the works of Pelletier, Caventon, Kustner, and Buchner. We shall merely observe that its taste is intensely bitter; that it exhibits very minute crystals of a quadrangular form; and when exposed to heat gives out an empyreumatic oil, acetic acid, carbonic and hydro-carbonic gas, leaving behind a considerable quantity of carbon.

In preparing strychnium, the author employed the following process, which is similar to that of the celebrated Pettenkofer. Forty-eight ounces of nux vomica, after being washed several times in water, were steeped for forty-eight hours in a quantity of it, equal to their own weight, and then cut into small pieces; and a quantity of cold water of double that weight being poured on them, they were softened for twenty-four hours longer, and frequently stirred with a spatula, and then passed through linen. The same process was followed with what remained on the strainer, and with the same quantity of water. This operation having been once repeated, hot water was poured on the seeds, which produced little more effect on them than the cold water had done; the nux vomica retaining a very intense bitterness even after the maceration. The liquors obtained from the cold and hot infusion were then mixed, and boiled down to the quantity of thirty-two ounces. Into this fluid, which was brown and muddy, the liquor of caustic potash was dropped, so long

* Strychnii vis ac efficacia in corpus animale, auctore Theophilo Cramer. Bonnæ.

as any thing was precipitated. Whilst this was going on, there was first an ammoniacal smell, which was afterwards changed into the smell of ox gall. The precipitated matter had the appearance of a powder, but soon assumed a crystalline form. After the sediment had remained at rest for twenty-four hours, it was separated from the limpid fluid, which had an alkaline taste; and being then put upon a filter, and any remains of the liquid being carefully removed, it was then dried. This mass afforded strychnium in conjunction with fibrine and colouring matter; for it was yellow, and its weight was four drachms, and when it was dissolved in three ounces of hot spirit of wine, a brown sediment was deposited, which weighed two drachms. When the spirit of wine of the solution was removed by a gentle heat, the strychnium appeared of a crystalline form, of a reddish yellow colour. When the red fluid was removed, the strychnium was several times washed with water, and being then dried with a moderate heat, its weight was 120 grains, exactly what Pettenkofer had obtained from the cold infusion.

Dr. Cramer found, that by dividing the nuces vomicæ into very minute pieces, by steeping them long in hot water, and bruising them repeatedly in a mortar, he could extract much more strychnium from a given quantity of the article, than he obtained by the above process, but by no means so as to repay him for the additional trouble and expense; but, in preparing strychnium from a watery infusion, he recommends that hot water should be used in preference to cold, and that the nuces vomicæ should be divided into as minute particles as possible.

With strychnium prepared in this manner, the author, in order to ascertain its powers, made various experiments on frogs, birds, and quadrupeds. To kill frogs he made use of a spirituous liquor, fifty drops of which contained one grain of strychnium. A very minute quantity of this solution, in whatever way it was applied to the frog, produced convulsions; but those were much more violent when the application was made to the heart, and spinal marrow or brain. To ascertain whether the heart or spinal marrow, when touched with strychnium, propagated convulsions with most rapidity, he made the following experiment: the spinal marrow of frogs of the same kind and size, being as much as possible laid bare, some drops of the poisonous solution were poured upon it; and the same thing was done at the same time to the heart of other frogs, after the thorax and pericardium had been removed. Spasmodic movements appeared in both, but much sooner in the latter.

The subject of the next experiment was a young unfledged sparrow. A wound was inflicted on the upper side of its leg,

into which a few drops of the spirit of strychnium were poured. In a few seconds the animal was attacked with convulsions, which gradually increased in violence. The breathing was at first laborious, and then seemed to cease altogether. Universal tetanus ensued; and when this went off, the animal appeared to be completely paralyzed; but from the brightness of its eyes, it was thought not to be quite dead. This state lasted for one hour, at the end of which the creature was left for dead; but in a few hours the sparrow was heard chirping merrily, and when it was examined the wound was found quite dry.

Twelve drops of the spirit being put into a pigeon's mouth, the bird was violently convulsed, and died in a few minutes; and being dissected, the surface of the brain, cerebellum, and spinal marrow, was found suffused with blood, and the right and left ventricles of the heart were full of coagulated blood. One drop of a fluid, which consisted of twelve grains of strychnium, six grains of muriatic acid, and 262 grains of distilled water was put into the left eye of a pigeon. The pupil was immediately contracted. The creature wandered about, but in five minutes fell to the ground, extending its tail, feet, and wings, bending its head back, and panting for breath; its heart at the same time beating with great violence. Three minutes and a half after this it died, the pupil of its eye being still more contracted. After it had been two hours dead, the pigeon was dissected. The heart was full of blood; its right auricle beat when stimulated; there was not much blood in the brain, but the surface of the cerebellum was injected with blood; as were also the coverings of the optic nerve. In the spinal marrow there was no change whatever. A quarter of a grain of powdered strychnium was put into a chicken's eye, but, although it occasioned convulsions, it did not kill the animal.

Ten drops of the spirituous solution of strychnium were thrown into the rectum of a young puppy dog. The creature wandered about very uneasily, and evacuated its urine and fæces. In six minutes it was seized with violent tetanus, and frequently moved its under jaw, and much saliva ran from its mouth. It died in a quarter of an hour. On dissection, it was found that the inner surface of the lower portion of the rectum was much redder than that of the upper portion. The blood in the left ventricle of the heart was found coagulated. The brain was full of blood, but the lungs were not. The lower part of the spinal marrow was red. The eighth part of a grain of strychnium being put into the eye of a young dog, it became convulsed, and died in ten minutes. The effect produced on cats was neither so violent nor so suddenly fatal. Three drops of the

solution of strychnium, which contained muriatic acid, were put into the mouth of a kitten four days old. In two minutes the hind legs were in a state of tremor; the body was rolled upon one side, and the creature was seized with spasms, which lasted for some time with greater or less violence. The lower jaw was often moved upon the upper one. The pulse was quick; the abdomen hard and tense. In little more than three hours the kitten died. On dissection, the vessels of the brain and spinal marrow were observed to be unusually full of blood, and particularly in the upper part of the spinal marrow; yet there seemed to be no want of blood in the lungs, heart or bowels. About a drachm and a half of the muriated solution of strychnium was poured into the mouth of a kid. Soon after, its limbs were becoming stiff, its pace slower, and its hind legs were moved with greater difficulty. The animal trembled and became uneasy, and in ten minutes after the poison had been administered it fell to the ground, and was attacked with severe spasms, which were increased when its body was even slightly touched. The pulse could not be counted, the breathing also was much hurried. The pupil was at first contracted and afterwards dilated. There was then a remission of the spasms, during which the heat of the body seemed to be much increased. In about five minutes there was a fresh attack of spasms, and the eyes were distorted. The animal then died. The body was opened next day. In the ventricles of the brain were some black streaks, formed of coagulated blood. Nothing remarkable was seen in the spinal marrow. The ventricles of the heart were full of coagulated blood, but not quite so much so as the auricles. The lungs were in their natural state. Some part of the intestines had lost their natural colour.

When a drop of the muriated solution of strychnium was put into the eye of a rabbit, the pupil appeared to become smaller, and in little more than five minutes the limbs were seized with tetanic spasms, the head was drawn backwards, and the muscles of the face were thrown into violent action. In four hours the animal died. It was opened next day. The coverings of the brain were distended with blood; and at the place where the convolutions of the brain approach the cerebellum, there was a black coagulum. In short, the brain, cerebellum, medulla oblongata, and that part of the spinal marrow which is covered by the vertebræ of the neck, were all tinged with blood; and the optic nerve of the eye, touched with the poison, was much redder than the other. Several other experiments were made with rabbits, in which nearly the same phenomena occurred as in the above. In rabbits, the spasms were always increased

when any thing irritating was applied, or even when air was blown upon them. The brain and spinal marrow, on dissection, were not always turgid with blood; in some cases they even seemed to contain very little. The eye of the rabbit appeared to be uncommonly sensible to the poison, much more so than any other part. The poison also affected, and very soon killed, a pig and a mouse.

From the above experiments, and those of Pelletier and Caventon, it will be readily allowed that this substance is one of the most violent and most powerful narcotic poisons. But its power seems to be greatly increased when it is joined with muriatic acid; and Hahnemann, before the discovery of strychnium, had shewn the fallacy of the opinion that acids are the antidote of nux vomica; for he asserts, that he had seen its poisonous effects increased by the use of lemon juice. But, he observed, that camphire, when given to dogs which had swallowed nux vomica, had a very beneficial effect in counteracting the poison. Pelletier and Caventon recommend morphium, or opium, as an antidote.

The author now proceeds to compare the powers of nux vomica, in so far as they have been observed and described, with those which Caventon, Pettenkofer, and himself, had observed in strychnium, in order to ascertain whether the virtues of the nux vomica depend most on the strychnium which it contains, or upon any other of its ingredients. Even the older physicians have endeavoured to find out and examine by experiments the qualities of nux vomica. Antonius de Heyden gives the case of a dog as affected with this drug, and informs us that it was seized with anxiety, shivering, trembling, convulsions, and hurried breathing. Then Wepfer, and many other authors, have narrated experiments which they have made with it. Very lately, Desportes, a French author, has given an account of its chemical, physiological and medical qualities, with various experiments which he made on fowls, dogs and frogs. But these, and others made by Magendie, Delille, and Lesant, will be found in Orfila's work on poisons. Senter informs us, that he saw a woman who had taken nux vomica, with the view of curing an ague, seized with dreadful convulsions, producing numbness in almost every part of the body, which probably would have proved fatal, if an alixepharmic remedy had not been speedily administered. In Hahnemann, and other writers on the materia medica, many curious remarks will be met with on this subject. The author, in a note, has referred to these writers.

From all this it must be evident that strychnium is the real

cause of the narcotic and poisonous quality which exists in nux vomica, and also, if we believe Caventon and Pelletier, in the bean of St. Ignatius, and in snakewood. Indeed, none of their other ingredients possess qualities in the least resembling those of strychnium; and so far from adding any thing to its activity, they very materially lessen it.

From the experiments of various authors, and particularly of Mayer, it would appear that strychnium and its deliterious narcotic quality act upon the animal economy, not through the medium of the nerves but of the vessels, and what, perhaps, by some may be doubted, the vessels which carry blood. But the poison is also absorbed by the lymphatics, and may be mixed with the blood without passing through the thoracic duct, a circumstance which has been explained by Professor Harless, of Bonn. But we may ask, are the internal parts of the body, which suffer most from strychnium and other poisons of a similar kind—are they, and more particularly the spinal marrow, purely nervous, as many think? M. Cramer is inclined to think that they are not. Sensation, indeed, which depends upon the nerves, is comparatively little affected by the poison. Besides, the specific affection of individual nervous parts, which some are inclined to attribute to that poison, does not appear by any means to be yet proved; as the experiments, carefully instituted for that purpose, show only that no severe spasms can take place, unless the spinal marrow be entire; because it is necessary to life, and to the action of irritable organs.

It appears reasonable then to believe, says M. Cramer, that strychnium acts principally upon that vital function which is called the irritability of Haller, a principle inherent in the muscles, and which depends upon the influx of nervous energy; for strychnium produces contractions of the muscles, and at the same time affects the blood in a peculiar manner, and greatly changes it; but not so much so, it would appear, as to render it a poison to other animals. But it has not yet been ascertained whether any of the other secreted or excreted fluids may be contaminated by it. It appears, however, that the urine has been impregnated by the angustura virosa, and the amarita muscaria.

The author now takes a general view of the post mortem appearances; but these we have already taken notice of in our account of his experiments. We may observe, however, that the blood is generally found to have deviated a good deal from its natural colour, and to have lost much of its firmness. When strychnium has occasioned death, it appears to have done so by inducing apoplexy; but in the greater number of cases, death

appears to have been the result of palsy, brought on by previous over-excitement of an irritable system, and to have been hastened by the breathing becoming laborious and torpid. It is to be hoped that strychnium, from being a poison, may yet become one of the valuable remedies of our art. Magendie lately found it of great use in the case of an old man affected with muscular debility. Dieffenbach, a friend of the author's, informed him that it had afforded considerable relief in a paralytic affection.

Scarpa on the Recto-Vesical Operation *.

Although we have little fear that the so called recto-vesical operation of lithotomy should meet with general approbation as a substitute for the improved lateral one, yet we imagine that we shall afford some gratification to our readers, in laying before them the sentiments expressed on the question by one of the greatest ornaments of modern surgery.

"Most worthy friend,

"You ask me whether the recto-vesical operation of lithotomy has many followers in Italy?—To what degree of perfection it has been brought?—And what my own opinion of it is? As to its advocates, I may tell you that with us their number is very small; and as regards its convenience and utility, I will freely tell you my mind, or rather give you the reasons on which my preference of the lateral operation is grounded. At the end of my Memoir on the hypogastric operation, you must have remarked the reasons which led me to think that when the stone is large, the high operation is not only useless, but also fatal to the patient. From the same motives, I am of opinion that when the stone is of an unusual size, no advantage, but on the contrary injury, is to be expected from the recto-vesical operation, as in such circumstances the unsuccessful event of an operation depends not so much on the facility or difficulty of the execution of any particular method, as on the diseased state of the coats of the bladder caused by the prolonged presence of a large calculus.

I admit that a bulky calculus may indeed be extracted more speedily, and with less risk of injury to important parts, by opening the lower part of the bladder from the rectum, than by the

* Lettera del Professore Scarpa al Professore Maunoir sul Taglio Retto-vesicale per l'estrazione della pietra.

high operation; but besides that in such cases every kind of operation is contra-indicated, in that by the rectum there remains, after the removal of the stone, a permanent passage for the fæces into the bladder, and for the urine into the rectum. Of three individuals, within my knowledge, on whom this operation was performed for the extraction of large calculi, two soon died of gangrene of the bladder, and the third dragged on a miserable existence for some time, discharging fæcal urine and urinous fæces.

Instructed by these failures, some Italian surgeons endeavoured to remove their causes, and having ascertained that, in order to extract a calculus of moderate size, it was unnecessary to cut the lower part of the bladder, they adopted the method proposed by Sanson, which consists in dividing the sphincter ani from below upwards, and opening the membranous part of the urethra and the prostate from above downwards. By this measure they certainly attained their object, viz., that the fæces did not enter the bladder after the removal of the stone.

This method was of considerable importance to their proposal, but, in my opinion, not so much so as to render the recto-vesical operation preferable to the lateral; and that for the following reasons;—First, because the vertical section of the membranous part of the urethra and of the prostate cannot be made without separating the left common seminal duct from the vas deferens and vesicula seminalis of the same side. Secondly, because the fæces cannot be prevented from entering the wound.

I cannot speak precisely as to the injurious consequences of the division of the left seminal duct. Until experience shall have given us positive information on this point, I may be allowed to make some suggestions on the probable event of such an injury.

In children the seminal ducts are small, and kept pervious by an aqueous vapour rather than by distention from fluids. Hence to me it appears very possible, that, during the adhesive inflammation of the prostate, the divided orifices of one or both ducts might be filled by effused lymph, and either contracted or obliterated in the cicatrix of the prostate. This might not recur in adults, or not so readily, but probably the division would give rise to a fistulous opening. In this case it is unlikely that the fistulous opening should be capable of performing the peculiar functions of the natural orifice of the common seminal duct. It is well known that the orifice of every excretory duct has a particular direction at its opening into any of the cavities of the body; that it has a particular structure and a mode of sensibility peculiar to itself, by which it regulates the effusion of the fluids

transmitted to it, at one time hindering, and at another facilitating their passage. Instances of the inconveniences arising from the injury of such parts, present themselves in the stenonian and in the lactiferous ducts; and many cases of constant seminal flux from corrosion or obliteration of the natural orifices of the seminal ducts are related by Morgagni, Epist. XLIV. 16, 17; by Heers, Obs. Rariores; Acta. Med. Berolin, T. IV. Dec. 1: Comment. Lips. T. XXIV.; by Sauvages, and others.

Besides the loss of one half of the ejaculatory apparatus from the obliteration of the orifice of one of the seminal ducts, the same consequences must be expected as in the case of ligature of the excretory duct of a gland. Viberg, a veterinary professor, twice found in horses the duct of the parotid closed by the inflammation succeeding to a wound; and in a third, having purposely tied this canal, found that the parotid at first became tumid, but gradually ceasing to secrete, sunk away, and fell into a state of atrophy. (*Effemeridi Fisico-Med. No.* 3, *Milano*, 1804.) From such facts, it is to be feared that the same thing would happen to the left testicle from the obliteration of the left seminal duct.

But this is not the only method in which the function of the seminal duct may be impeded by its division. The cicatrix of the prostate and caput gallinaginis may cause the orifice of the seminal duct, although pervious, to deviate in such a manner as not to correspond with the direction of the urethra. La Pergronie (*Acad. R. de Chir. Vol. II. in* 8*vo. p.* 318) has related the case of a man, in whom such an affection was the consequence of a neglected gonorrhœa: he had lost the power of ejaculation, the seminal fluid slowly escaping after the act of coitus had terminated, and without the sensations usually attendant on emission. Having died from an accidental cause, the penis was divided along the dorsum to the neck of the bladder, when a cicatrix was found on the caput gallinaginis, causing the orifices of the seminal ducts to deviate in such a manner that they were directed to the neck of the bladder instead of the orifice of the urethra.

And here I will call to your recollection that almost all surgical writers, in speaking of cicatrices, and injuries of the seminal ducts, causing impediment to their functions after lithotomy, inculpate the Celsian operation when badly performed; the incision, in such cases, which ought to be made laterally in an oblique line from the pubes to the tuberosity of the ischium, as in the lateral operation, being carried in a line almost parallel to the raphe of the perineum, very nearly the same at present employed in the recto-vesical operation. Tolet (*Traité de la*

Lithotomie) gives a proof of the consequence of the ignorance of those who performed with the minor apparatus, telling us that he had several times seen the rectum vertically divided in this operation. Now, whether the calculus were propelled into the beginning of the urethra by the finger introduced into the anus, or whether it was compressed against the neck of the bladder, and not sufficiently inclined towards the ramus of the left ischium, by a vertical incision of the perineum penetrating into the rectum, the left seminal duct would be inevitably injured in the first case; in the second, the left vas deferens and vesicula seminalis. Heister, a warm advocate of the apparatus minor, admits the great probability of the second kind of injury in the circumstances above mentioned, if the prescribed rules be deviated from. Callison, on the same subject, says, "vesiculæ denique seminales, vas deferens, ac ductus excretorii facile læduntur." —(*Vol. II. p.* 600.)

Is there not, then, an evident resemblance between the recto-vesical operation and the apparatus minor when improperly performed? And is it not rational to expect the same inconveniences in the one as in the other case?

As to the wound, although it comprises but a moderate extent of the upper side of the rectum, it is still constantly in contact with the fæces, particularly if there be diarrhœa, or if it be necessary to administer purgatives or clysters. To cure the wound speedily, say the advocates of the operation, it should be daily rubbed with the nitrate of silver. This is as it should be: it is unnecessary to take much trouble to discover the necessity of such a painful treatment; for, in order to avoid the inconvenience arising from the irritation of the fæces, such as swelling, fungus, ichorous discharge, &c., it is evidently necessary to create and keep up a crust on the surface of the wound.

To recapitulate what I have already said, the recto-vesical operation would be the best of all the modes hitherto proposed for the removal of a stone of unusual bulk, if it were not for the contra-indication to any operation, in such cases, from the state of the bladder; and to this one in particular, from the communication left between the bladder and rectum. When the stone is of moderate size, the recto-vesical operation, even according to the method of Sanson, cannot be substituted with advantage for the lateral one, because it cannot be performed without the division of the left seminal duct, or even of both, if the groove of the catheter be directed to the right side; and if, as is often the case, they run parallel to, and in contact with each other previous to opening on the caput gallinaginis. The certainty of not wounding the pudendal artery is not an

advantage of the recto-vesical operation exclusively. The dread of such an event no longer occupies the minds of our operators, now that they are familiar with anatomy, and skilled in the use of the scalpel. For those who are less dexterous, surgery has provided simple instruments, with which following equally simple rules, they may safely divide the prostate laterally, without fear of injuring the spermatic vessels, the pudendal artery, and still less the rectum; facts proved, by the daily experience of the most illustrious surgeons of all nations.

I shall conclude, by a reference to a singular reverse in the operation of lithotomy. In 1745, a period at which the most celebrated surgeons combined in the endeavour to bring it to perfection, Islemann, under the presidency of Heister, or Heister himself, published a dissertation, *(Dissertatio de Lithotomiæ Celsianæ præstantia et usu)* in which he attempted to prove the Celsian method preferable to any other. In our own times, an effort is made to persuade us that the lateral operation nearly at the highest point of perfection, is inferior to the recto-vesical, which in certain respects, is still more imperfect than the Celsian.

In these reflections, I have no intention to censure or misinterpret the motives of those who attempt to improve the old processes, or to introduce new ones, adapted to the changes of circumstances; but on such subjects, it is right to remember the maxim; "Nisi utile et quod facimus, vanum."

With the most perfect esteem and friendship, I am, &c.

A. Scarpa."

M. Fohmann on the Lymphatics and the Veins *.

Although the theory which M. Fohmann has supported in this valuable treatise is by no means new, it has hitherto rested only on hypothetical considerations, and as far as we know, this is the first attempt of any value to establish it by the results of experiment. On this ground, M. Fohmann seems justly entitled to all the merit of being a discoverer, and of having added some very valuable facts to our information on the subject he has investigated. Steno, Nuck, Waleus, Pecquet, Wepfer, Meckel, and other anatomists believed in the

* Anatomische Untersuchungen über der Anastomosis der Lymphatiken mit den Venen; von Vincenz Fohmann, Prosector zu der Facultät der Medicin zu Heidelberg.—Heidelberg, 1821.

existence of a free communication between the absorbents and veins, but without any sufficient grounds, and it is needless to remark on the varying importance attached to the same point, when hypothetically proposed, and when experimentally proved. Independent of this, however, the subsequent inquiries of the Hunters, of Monro, of Cruickshanks, and of Mascagni, to whom we are indebted for the greater part of our knowledge of the absorbents, tended to disprove this idea, and to bring about its rejection.

A preface to the book is given by Professor Tiedemann, who adopts the conclusions of M. Fohmann, and re-advances the opinions which he has already proposed, in his Researches on the Functions of the Spleen; viz., that the lymph and chyle are gradually mixed with the blood, and that the lymphatic glands, together with those which have no excretory duct, as the spleen and supra-renal capsules, are destined to effect this purpose. He concludes that these organs convert the lymph and chyle into blood, from observing, that in proportion as those fluids advance in the lymphatics, they approximate to the colour and consistence of the blood, and finally assume its physical and chemical qualities.

We proceed to give an abstract of M. Fohmann's experiments on the human subject, dogs, cats, martins, seals, otters, horses, cows, and birds.

1. In the human subject, M. Fohmann has frequently injected mercury into the chyliferous vessels, and has found that the metal passed from the lymphatic glands, sometimes into the lacteals only, at others into these vessels, and into the veins, and at others into the veins only. He has also observed that the passage into the veins rarely occurred in the glands next to the intestinal tube, and still less frequently in those next the thoracic duct; consequently, that it took place in the intermediate ones. He does not pretend to say, whether or not this depends on difference of structure; he has, however, remarked that the lymphatic vessels are nearly as large at their origin in the intestine, as in the rest of their course: he has also noticed two kinds; the first very small and isolated, surround the intestine, and are placed between the mucous and muscular coats; the second, placed between the muscular and serous coats, are larger, being often as big as a crow-quill; these run longitudinally to the glands, becoming smaller, and similar to those of the first kind. M. Fohmann thinks that these vessels arise from the cellular structure uniting the mucous membrane with the muscular, and supposes that they communicate with the veins in the intestine

itself. In the abdomen of a suicide, whom he opened four days [*Qu.* hours?] after death, he found the lymphatics of a part of the intestines tumid with chyle, but in a few instants they became empty and indiscernible; the veins were without blood, but on opening them, he found a chylous fluid at their extremities, and thinks it more probable that this fluid was derived from the lymphatics which he had seen emptied, than from the intestine. He has never succeeded in injecting the lymphatics of the stomach, on account of their tenuity and want of resistance, but he has seen them forming two strata, as in the intestines, and running to the glands at its greater and lesser curvature: when mercury was injected into these glands, it entered both the veins and lymphatics.

He has also frequently injected the lymphatics of the arm from the back of the hand, and found that the mercury entered the veins of the forearm, after passing through the glands situated near the joint. He has made the same observation in the axillary and inguinal glands, and has seen the mercury pass directly from one of the lumbar ganglia into the inferior vena cava. From these facts, he concludes, that in the human body there are probably glands without any vasa efferentia, or in which such vessels communicated only with veins. The mesenteric and axillary glands seem to be principally liable to this disposition.

2. M. Fohmann has injected the lymphatics of the intestines and extremities in many dogs, and has remarked that the upper and middle parts of the intestines are most copiously supplied with lymphatics, that they diminish in number towards the termination of the small intestine, and again increase in the large ones; they all run to the great mesenteric ganglion, called pancreas aselli, where they communicate partly with veins, partly with other lymphatics, and partly with each other. These vessels are always larger previous to their entrance into the mesenteric ganglion, than after their exit in their course to the thoracic duct. M. Fohmann could never discover any vasa efferentia arising from the mesenteric glands, but found that the mercury always escaped from them, by means of minute veins. He thinks that the absorbents of the stomach have the same disposition as in man, for the mercury enters the veins in the same manner. The absorbents of the liver in this animal, are very numerous and visible, and may be injected with great facility; the greater part of them run towards glands situated between the liver and duodenum, and the mercury, after passing through them, always enters

the veins. Immediately after death, he removed the blood from the veins of these glands, and remarked that in a few instants they were filled by a yellowish fluid similar to that in the lymphatics of the liver. In one instance, he injected a lymphatic on the back of the tarsus, and filled five large vessels, which ran to a large gland in the ham; this became distended by mercury, which escaped from it partly by absorbents, partly by veins. The same thing happened in the inguinal, lumbar and axillary glands. In some instances, the mercury escaped so freely from the axillary ganglia into the transverse scapulary vein, which had been previously tied, that to avoid rupturing it, he was obliged to stop the injection, and yet was unable to trace the means of communication.

3. He injected many lymphatics in the mesentery of one wild cat, and of two tame ones, and remarked that the mercury passed into the veins, as well as into the vasa efferentia. In the wild cat, he observed that the lymph was of a red colour, and so much coagulated, that the mercury ran with some difficulty into the mesenteric glands. He noticed also longitudinal vessels on the large intestines.

4. The author injected several lymphatics in the mesentery and small intestines of a martin, and obtained the same results as in the preceding experiments; the anastomosis with veins, however, appeared less frequent than in the cases already noticed. In this animal, also, lymphatics were seen on the large intestines, which had a longitudinal direction.

5. In the seal, according to M. F., all the chyle passes from the mesenteric glands into veins; for having injected the absorbents of the small intestine into two seals, he found that the mercury passed from the glands into veins, and never into absorbents. He observed the same fact in the pulmonary lymphatic glands, and adds that two preparations of this kind, the one dry, the other in alcohol, are preserved in the Museum at Heidelberg, and demonstrate the facts in question. He has not remarked a similar disposition in any other animal, for in the cervical and inguinal glands, there are not only minute venous ramifications, but even large branches in the substance of the gland. He adds in a note, that as long back as 1811, the fact of the communication of the chyliferous vessels, with the system of the vena porta, had been discovered by Professor Vrolyk, although he has not seen the author's treatise.

6. From analogy, the same disposition might have been expected in the otter, as in the seal; on the contrary, of seven mesenteric glands, two only communicated with veins, the others with absorbents. There were many longitudinal lymph-

atics on the large intestines, and many of those of the liver anastomosed with veins in the glands. M. Fohmann here gives a description of what he calls the longitudinal absorbents of the large intestines in the carnivora. These vessels are small, and not very visible on the cæcum, but become larger, and more numerous, as they approximate to the rectum, where they are sometimes as large as a goose-quill, particularly in the lion, the animal in which M. F. first noticed them. He found them in the cat, dog, seal, otter, bear, martin, and badger, but not in the smaller carnivora, though from analogy, he believes in their existence. They cover the large intestine, forming a network by their anastomoses. The branches that they send to the mesenteric glands are so small and inconsiderable, that they cannot possibly transmit all the contents of this network; hence, the author concludes that it must communicate directly with veins. He supposes that this number of lymphatics is rendered necessary, by the shortness of the great intestine, and that absorption is more active here than in the rest of the alimentary canal.

7. From experiments on horses, M. F. asserts that the absorbents of the greater and lesser curvature of the stomach, on entering glands, pour their contents both into veins and vasa efferentia: the duodenum has few chyliferous vessels, but they increase in number towards the middle of the small intestine, and again diminish at its other extremity; they all proceed towards the mesenteric glands, in which they communicate equally with the veins, and with the vasa efferentia; some of these vasa efferentia proceed to other glands, there to communicate with veins; lastly, having emptied the veins proceeding from the mesenteric glands in a horse scarcely dead, M. Fohmann tied them, replaced them in the abdomen, and remarked in a short time that they were filled with blood, most distinctly marked with chyle-like streaks, the blood soon assuming the colour of chyle.

8. In cows, also, the lymphatics of the small intestines communicate with the veins at their exit from the mesenteric glands. Those of the large intestine are very numerous between the muscular and mucous coats, and are much larger than those of the mesentery. The author describes a remarkable mesenteric gland, which he supposes not to have been previously noticed. It corresponds to the middle of the small intestine, is from two to three inches long, and about three lines thick. Like the other glands, it receives arteries and vasa efferentia, and sends off veins and vasa efferentia, but it is less consistent, and its parenchyme is internally blacker,

externally lighter than that of the others. The black matter is soft, and radiated to the edges of the gland. M. Fohmann arranges this organ with absorbent glands, because lymphatics enter and pass out from it, but he is of opinion that its structure has much analogy with that of the renal capsules.

9. The existence of lymphatics in birds has only been admitted in certain parts, except by a few anatomists. M. Fohmann has found them in all the large birds he has examined, in the swan, heron, bustard, goose, duck, and bittern, not only in the neck, but contrary to the assertion of Magendie, on the intestinal canal, particularly of the four first. In the swan he has injected some of these vessels, and has seen the mercury running towards the thoracic duct. In the heron, bustard, and goose, he has seen a vessel passing from the small to the large intestines, and uniting with the renal plexus of absorbents. He has also, with ease, injected the lymphatics of the thigh in the same birds, and observed them running to the same plexus, which is a collection of anastomosing vessels below the kidney. This plexus gives off some small branches to the thoracic duct, and some larger ones to the renal and sacral veins. He has seen the mercury pass from a lymphatic on the outside of the thigh in a bustard into a coccygeal vein, and so into the crural vein. As to the lymphatics of the neck, admitted even by Magendie, the author has seen them, and remarked that they passed to small ganglia, described by Hewson and Tiedemann: in the bittern he found them on the right side only. These lymphatic glands have manifestly vasa efferentia, but not any discernible vasa inferentia. The same remark is applicable to two other glands placed at the side of the larynx. The author supposes that they are intended to secrete a peculiar fluid which is absorbed by the lymphatics, and serves for the assimilation of the chyle and lymph.

These researches on the anastomoses of lymphatics with veins are, as we have shewn, founded on mercurial injections; but as it has been said, in particular by Mascagni, that such a communication is impossible without laceration, the author has thought proper to make some observations on this point. He employed the mercurial apparatus of Sömmering, which consists of a glass tube with a steel pipe, and used but little mercury at a time, in order that it might flow gently. Besides, the greater part of the injections were made a short time after death, and before the least appearance of putrefaction. Extravasation certainly took place occasionally, but without the effects supposed by Mascagni; for the laceration of the parenchyma of the gland interrupted the passage of the metal into the veins, and if the

injection was continued in such circumstances, the metal escaped into the surrounding cellular tissue. In the next place, if the metal enter the veins by rupture, two sets of vessels must be lacerated, an improbable supposition, and unsupported by facts. Lastly, as the mercury constantly appears in the veins, how happens it that we never observe it in the arteries?

In the Prodromus of his great work, Mascagni pretends that the mercury does not enter the veins when the glands are completely, but when they are partially, filled. Besides that this is altogether contradictory to the idea of laceration, M. Fohmann has observed the occurrence in both cases, and, as we have already said, he found in the dog and seal glands without any lymphatic vasa efferentia.

In animals recently killed, the same fluid is discoverable in the veins issuing from glands as in the lymphatics, a fact which the author has repeatedly ascertained by the ligature of such veins. In birds, the absorbents of the extremities communicate with the veins in the pelvis, consequently at a distance from the thoracic duct; hence this vessel cannot be so absolutely necessary as Haller and others supposed. The volume of all the lymphatics in mammiferæ and birds much surpasses the calibre of the thoracic duct, a circumstance which M. F. thinks very favourable to the communication of the lymphatics and veins. Previous to drawing such a conclusion he ought, however, to have shewn that the comparatively small size of that canal was not compensated by an increase of velocity in the motion of its contents. He remarks in the last place, that animals, in whom the duct has been tied, live longer than those who perish of hunger.

From these considerations he concludes that the anastomosis of the lymphatics with the veins can be no longer doubted, and that the experiments of Magendie on venous absorption are less conclusive than has been supposed, as the ramifications of the vena porta communicate with the lacteals in the mesenteric glands. The experiment, in which symptoms of poisoning follow the introduction of nux vomica into a detached piece of intestine, communicating with the body only by an artery and vein, affords no proof of absorption by the mesenteric veins, as they anastomose with lymphatics in the intestine. So also a similar experiment, in which poisoning was effected by the introduction of upas tieuté into the cellular tissue of the paw of a dog, whose thigh communicated with the body by the artery and vein only, is equally inconclusive; for, according to M. Fohmann, the absorbents of the limb communicate with the veins in the popliteal glands. He does not, however, deny the pos-

sibility of venous absorption: on the contrary, he thinks it probable that this function may be connected with the communication between the lymphatics and veins. In fact, if we consider that a copious injection into the veins is often followed by injurious consequences, or even by death, whilst the reverse is observed if the same injection be gradually made, we may conclude that the sudden mixture of the chyle would be productive of inconvenience, and that for such reasons it is slowly and insensibly effected as well in the glands as in the blood-vessels.

In the last place, M. Fohmann supposes that the chyle, and other substances absorbed from the intestines, after having undergone a certain degree of assimilation previous to their entrance into the vena porta, are submitted to a second process of the same kind in the liver, being not only more intimately mixed together in this organ, but also freed from the materials of the biliary secretion, whence it results that a part only of the chyle reaches the thoracic duct, in which it approaches still more nearly to the nature of the blood, by its mixture with the reddish coagulable lymph, which M. Tiedemann and Gmelin describe as coming from the spleen.

Such is the work of M. Fohmann, which presents many points of interest to the physiologist. What we already know, renders the communication he has described between lymphatics and veins more than probable, but whether it occurs as frequently, or as uniformly as he wishes us to believe, and whether, admitting that such is the case, he be justified in the extent of the conclusions he has drawn, are questions which require much consideration, and can only be decided by the examination and repetition of his experiments.

PANIZZA ON FUNGUS MEDULLARIS OF THE EYE*.

This treatise of Professor Panizza, is presented as a specimen of his anatomico-chirurgical observations on different diseases: it is divided into two parts, of which the first treats of the medullary fungus of the eye, although with the exception of the description of the case which gave rise to the Memoir, and of the pathological and anatomical remarks on the ap-

* Annotazioni anatomico-pathologiche sul fungo midollare dell'occhio, e sulla depressione della cataratta; di Bartolomeo Panizza, Professore di Notomia umana nell I. R. Università di Pavia. Con tre tavole. Pavia.

pearances found after death, the greater portion of it is devoted to the disease in general.

In his preface, he expresses his conviction that surgery has hitherto improved, and can only be perfected by a diligent study of morbid anatomy, and states, that having witnessed a case of fungus of the eye, attended by peculiar symptoms, he resolved on giving an accurate description of it, with some remarks; from a comparison of its phenomena, with those of similar diseases in other textures, he is induced to advance the conclusion, though only conjecturally, that the medullary fungus is a product, or effect, of a scrofulous constitution. Having in the year 1818-19, occupied the clinical chair for teaching and demonstrating eye-diseases, he was requested by the students to publish at least a part of his theoretico-practical lectures. He selected the subject of cataract, and has made many valuable, practical, and critical remarks on the various operations necessary for its removal: with these, we shall take an early opportunity of making our readers acquainted; at present, we shall confine ourselves to the fungus of the eye.

This horrible form of disease was not altogether unknown to the ancients, although they have described it under various denominations, and frequently confounded it with others: Professor Panizza quotes, in particular, Severinus, in his treatise, "De recondita abscessuum natura;" in which he has given delineations of the appearance it assumes. Notwithstanding, however, such occasional and uncertain notices, it cannot be doubted that its real nature and attendant symptoms have been discovered and explained by writers of a very recent date. Let us add, too, that to the surgeons of this country, the honour of the investigation fairly belongs, and that they are at the present time in possession of a greater number of facts, and more authentic information on the subject, than those of perhaps any other nation; for the confirmation of this assertion, we may quote the names of Hey, Burns, Abernethy, Wardrop, and Langstaff. As a distinct form of disease, it was unknown to the French, until the publication of M. Breschet's paper, in Vol. XX. of Dict. des Scien. Med. on that article, together with M. Maunoir's pamphlet, published in 1820, some observations have already been made in this Journal, Vol. II., p. 284, which establish this claim in the most satisfactory manner, and to them we beg leave to refer our readers.

Passing over these matters, we come to the most interesting part of the treatise—the history of the case in which it originated.

Bartolomeo Stragiolio di Sartirana, born of unhealthy, and evidently scrofulous parents, had passed five years of his life in good health, when in the summer of 1818, after an intermittent fever, an external ophthalmia of the right eye appeared, attended by severe pain in the head. The inflammation was reduced by active antiphlogistic treatment, but the headache continued, with weak vision, and slight redness of the conjunctiva. During the following winter, he evidently fell away, partly from the suffering caused by his continued illness, particularly the headache, and partly because his unfortunate condition did not allow of his procuring suitable nourishment. In the mean time, the diseased eye had lost its natural motion, the pupil was dilated and immoveable, and presented at its posterior part an increasing opacity. In this state, the child was seen by a surgeon, who did not hesitate in pronouncing the disease to be an incipient cataract of the lens. The progress of the complaint soon proved the fallacy of this diagnosis; for at Christmas of the second winter, not only was the power of vision in the right eye wholly lost; not only was it protruded from the orbit, as if by the pressure of some increasing body; not only was the conjunctiva inflamed, elevated in a state of chemosis, tuberous, and fungous, the cornea being so opaque as to obscure the field of the pupil; but also, even in the left eye, the power of vision was totally lost, without any evident change of structure, and the pain in the head so much augmented as to afford a constant source of complaint.

The disease still making progress, besides the eversion of the palpebræ, and the malignant fungous appearance of the conjunctiva, the patient suffered from irregular febrile attacks, and his usual vivacity gave way to stupor, taciturnity, and continued somnolency. In the beginning of February, the right eye burst, with a copious discharge of serous, sanguinolent ichor, which produced but temporary alleviation. The aperture in the cornea continued to discharge ichor, and presented fungous tubercles; and on the 11th March, he was taken into the surgical hospital, under the care of Professor Volpi, about a year and a half after the commencement of the disease, which was registered as a cancer of the eye.

At that time a tumour presented itself between the palpebræ, of the size of a large nut, and of a dull red colour, with two points in the centre, divided by an irregular fissure, whence flowed a sanious serum. The tumour bled on the slightest touch, but when carefully examined appeared to proceed rather from the conjunctiva than from the globe of the eye. After remaining in the hospital eighteen days the child died, having previously become insensible and soporose.

The first part of the examination which our author made after death was directed to the state of the thoracic and abdominal viscera; he found them in general healthy, with the exception of the mesenteric glands, which were as much as six times larger than natural, and decidedly scrofulous in their structure; the body also presented every external character of scrofula.

The head was inspected with great care: on raising the skull-cap the bones of the cranium were observed to be very thin, particularly at the junction of the parietals with the frontal bone. The meninges presented nothing remarkable; the brain had its usual appearance as to colour and consistence, but was unusually wide in its transverse diameter at the sella turcica. The ventricles were much dilated, and contained from four to five ounces of bloody serum. There was not any communication between them, for even when the fluid was removed from one, the other remained distended. In the right ventricle was a reddish cerebriform fungus, occupying the situation of the pes hippocampi. The vessels of the choroid plexus were much enlarged, and their distribution on the walls of the ventricles, particulaly the right one, very evident. In the part of each ventricle, corresponding to the basis of the corpora striata and to the septum lucidum, were two tumours, the right one as large as a small hen's egg; it was very vascular, red in the middle, and yellowish-white at its anterior part; its texture was soft, particularly in the centre, which yielded to the slightest touch, and discharged a serous fluid mixed with very soft cerebral substance. On close examination, it appeared to be a pulpy fungous expansion of the base of the corpus striatum, being most considerable in the middle, and diminishing at its extremities. The tumour had elevated the septum lucidum, and thrust it to the left side. A similar change of structure, though of smaller size, occupied the base of the left corpus striatum. It was also apparent in the cerebral substance under the septum lucidum, and on the flat surfaces of the thalami optici, forming the lateral parietes of the third ventricle. These changes had mechanically produced two consequences; the first was the flattening and elevation of the anterior commissure, which was so much raised as to be on a level with the upper surface of the corpora striata, and to be plainly visible on opening the lateral ventricles; the second was the separation of the optic thalami, which, instead of being in contact as in their ordinary condition, were nine lines asunder at their upper margin; from the same cause the anterior pillars of the fornix, which are naturally in contact, were distant an inch from each other, and expanded over the diseased masses, particularly the right one.

The thalami were not only separated but elevated anteriorly by the morbid increase of the corpora striata, infundibulum, and parts below the septum lucidum, so that their superior surface presented a plane considerably inclined from before backwards. The colour of this mass was various, in general whitish; between the thalami it presented the appearance of irregularly spherical tubercles. Its consistence was softer than that of the brain, particularly in the middle of the tumour, at the basis of the right corpus striatum. When cut into, it presented an unorganized appearance, in some parts reddish, in others whitish and marbled. It altogether suggested the idea of a fungous degeneration of the medullary and cineritious parts of the base of the corpora striata, of the inferior part of the third ventricle, and of the sides of the thalami optici.

The brain was in the next place detached from the basis of the cranium, without injuring the optic nerves; the palpebræ, muscles, fat, &c., were then removed from the left eye, so as to expose the course of the nerve. These accessory parts were in their natural state, as was the organ itself. The nerve, as it approached the optic foramen, became oval and increased in size, but at that point suddenly contracted; it was smooth, white, and firm to the touch. The separation of the accessory parts, and of the optic nerve on the right side was not so easy, as they were closely matted together, forming a mass behind the ball of the eye, protruding it from the orbit. The conjunctiva was red, fungous, tuberculated, very hard, and in some points ulcerated. The eye was enlarged, unequal, rather soft anteriorly, but hard posteriorly in the vicinity of the optic nerve. The cornea presented an irregular opening, with hard projecting edges. The nerve was twice its natural size at its entrance into the eye, and when traced backwards presented a large olive shaped tumour, but again diminished in size at the optic foramen. The tumour was covered by the dura mater, was smooth, white, very soft in the middle, firm posteriorly, and still more so anteriorly in the neighbourhood of the eye.

The fat and cellular structure of the orbit were much indurated, forming three large roundish masses, hard at the circumference, soft and ulcerated at the centre, and adhering more or less firmly to the optic nerve. They protruded the eye from the orbit, making it, in combination with the fungous state of the conjunctiva, and the eversion of the palpebræ, appear larger than it really was. The muscles were flattened, wasted, and partially converted into a whitish, scirrhous state. The commissure of the optic nerves was twice its natural size, firmly adherent to the dura mater, and changed into a soft, reddish,

fungous substance, as were likewise the tuber cinereum, corpora albicantia, and peduncle of the pituitary gland.

The middle lobe of the right hemisphere of the brain was converted into a reddish soft substance, without any traces of the convolutions; the portion of the optic nerve which it covered was enlarged, soft and fungous. The tumour in the brain, which has been already described, corresponded inferiorly to the lower and front surface of the corpus callosum, to a great part of the inferior convolutions of the anterior lobes of the brain, to those of the middle lobe on the right side, to the grey substance near the commissure of the optic nerves, to the peduncle of the pituitary gland, to the corpora albicantia, and to the grey matter between the crura cerebri. Its colour was red in some places, as in the right middle lobe; in others dull white, as on the left side; between the crura cerebri it was softer than elsewhere. All traces of convolutions were lost, and the greater part of its surface was tuberculated. The olfactory nerves were quite undistinguishable within the cranium, but notwithstanding were very evident on the septum and ossa turbinata of the nose. The crura cerebri were separated to four times their natural distance, by the enlargement of the grey matter placed between them.

The nerves of the third pair lay in contact with the diseased mass; they were at a considerable distance from each other, and from the crura cerebri. Each, soon after its origin presented a hardish, white, oval swelling, and the right one a second at its entrance into the orbit. The nerve on this side also was imbedded in the diseased part of the middle lobe. When cut into, the swelling was white, soft, and clearly produced by a change of the filaments of the nerve itself.

It has been already mentioned that there was an oval swelling on the left optic nerve, soon after its entrance into the orbit. It had externally the appearance of an affection of the nerve itself, but when it was longitudinally divided, Professor Panizza found that the nerve was unchanged, having its usual colour, size, and consistence. The tumour was situated under the dura mater, adhering but slightly to this nerve; it was white, cheesy, and consistent externally, but interiorly pultaceous; it, in fact, considerably resembled the scrofulous change of lymphatic glands.

On making an incision into the right optic nerve, it was found to contain a substance firm at the circumference, soft and pulpy in the centre, and of a reddish colour. It contained many vessels running longitudinally, but there were no traces of the filaments of the nerve. The eye being detached, the posterior part of its cavity was found filled with a white substance, consistent at the edges, soft at the centre and in front. The an-

terior part of the organ was occupied by a fungus, white in some points, but generally red, continuous with the substance at the back part, and terminating anteriorly by an elastic tuberculated surface, bedewed with sanies.

From an attentive examination of the contents of the eye, it is to be supposed that the whole was the product of a change of structure in the retina: 1st, Because the inner part of the optic nerve, at its entrance into the eye, was continuous with the substance contained in it: 2d, Because their consistence was the same: 3d, Because when cut in various directions, and examined with a powerful lens, they presented the same appearances: 4th, Because, after the removal of this substance from the eye, the choroid and sclerotica were visible, but not the retina. There were not any traces left of the iris, lens, or vitreous humour, and only a small portion of the choroid at the lateral and front part of the eye.

After having attentively examined the external appearance and connections of the disease of the brain and nerves, Professor Panizza made two longitudinal sections of the former, and found that internally it had lost its natural texture completely; its colour was in some places deep red, with white striæ interspersed. The blood vessels were much enlarged, and it was remarked that the change of structure was more considerable in the grey than in the white substance.

Having laid before his readers the particulars of the facts observed in this examination, the author proceeds to express his opinion, that the exciting cause of this and similar diseases is a scrofulous diathesis. Altough in some degree inclined to coincide with him, we must allow that he has not adduced any proofs in support of this idea. Scrofula is one of those terms so loosely and vaguely applied, that it is almost impossible to give any description of it. Its most correct application is undoubtedly to the state of the system, which produces or favours the deposition in certain parts of the body, of the well known curdy or cheesy matter to which the appellation of scrofulous is given; but it certainly admits of a question whether there be any essential peculiarity in the state of constitution which brings about this change. For our own part we believe the contrary to be the case, and think it more probable that this state of constitution may be different, and connected with different causes in different instances; whilst we suppose the local changes to be dependent on the structure and actions of the part in which they occur, influenced and modified by age, sex, habit, climate, and other similar causes. By extending this illustration to other morbid changes, we may explain many circum-

stances which, on any other supposition, present considerable difficulty; such as the occurrence of two different changes in the same part, viz. cancer and scrofula, or scrofula and medullary sarcoma, of which we have well authenticated instances; the peculiarities which the same change presents in different textures, for instance, cancer in the breast, in the skin, in mucous membranes; the predisposition of particular ages, and of the inhabitants of certain countries to particular diseases; and lastly, the vast variety of causes which appear to produce effects perfectly similar. In this manner too we may understand how a disease, as cancer, scrofula, or medullary sarcoma, may be local, although its causes are constitutional, and may reproduce it in one part, after it has been cured or removed in another.

However this may be, Professor P. thinks that neither scrofula nor medullary fungus are exclusively confined to any age, and that the former occurs not only in the lymphatic system, as has been long and is even still supposed, but on the contrary affects many other textures, the bones and skin not excepted. As to the medullary fungus of the eye, he confirms the well known fatality of the disease, and remarks the fact, that the eyes are particularly liable to be affected in those of a scrofulous disposition, as in the instances of ulceration of the palpebræ, pustules on the conjunctiva, lacrymal fistula, and purulent ophthalmia. The medullary fungus is particularly frequent in children, according to Scarpa, Wardrop, and Desault, of whom the latter confounded it with carcinoma of the eye-ball. Professor P. draws an argument in favour of the scrofulous nature of medullary sarcoma, from the identity of the caseous matter found in scrofula, with that which he met with in the case he has related, collected between the optic nerve on the left side, and the dura mater, and with that which formed the gangliform enlargement of the third pair. Wardrop and Scarpa are of opinion that the fungous disease always commences in the ball of the eye on the retina, and at the entrance of the optic nerve, whence it is propagated to the brain. Dr. Panizza, on the contrary, thinks that in many cases it begins in the optic nerve within the cranium, and thence extends forwards to the retina, an idea favoured in the case he has related by the headache, which the patient suffered from the first. It is unnecessary to remark, that if such be the case, little indeed is to be expected from the only resource in our power, the removal of the eye. Cases on record, in which the operation has proved successful, shew that at least in some instances the contrary is the fact. The bare possibility of the occurrence must always, however, render the prognosis very unfavourable.

Professor Panizza refutes the strange idea of Maunoir, that the medullary fungus consists in an alteration of the nervous structure, by adducing instances of the occurrence of the disease in the arm, thigh, liver, lungs, &c., without any alteration of the nerves of the part. He thinks that the cases Maunoir has quoted on this point merely prove what he has himself asserted, namely, that under certain circumstances the medullary fungus may occur in any part of the system.

Such is the remarkable case related by Professor Panizza, together with a brief abstract of the pathological conclusions he has deduced from it. The value of the work is in no small degree enhanced by the excellence of the three plates annexed to it from the graver of Miazzi, under the direction of the well-known and unequalled Anderloni.

DR. HEINRICH SPITTA'S SURGICAL REMARKS*.

Dr. Spitta, having had an opportunity of witnessing the practice of M. Dupuytren, whom he justly considers as the first surgeon in France, thought that it might be useful to detail the histories of some of the cases which came under his observation. He has confined himself in the present communication, to the subjects of aneurism and hernia, and relates some cases which present many points of interest.

A man, aged 35, had served as a soldier during 14 years of the late war, and during that time once contracted the venereal disease, the only one which he had suffered since his infancy. For four months he had felt a stiffness and difficulty in the motion of the knee, the cause of which he discovered to be a swelling as large as a bean, but daily increasing in size. In January, 1821, he presented himself before the Central Administration of Hospitals, and was sent into the Hotel-Dieu.

The left leg and thigh were swelled from the hip downwards. The subcutaneous veins were much distended; several arteries, as large as the radial, could be felt pulsating about the internal condyle, and the ham was occupied by a considerable well-defined swelling. The pulsation in it was very forcible and

* Chirurgische Beobachtungen aus dem Hotel-Dieu du Paris, mitgelheilt von Dr. Heinrich Spitta. Hanover, 1822.

isochronous with that at the wrist, but ceased completely on the compression of the artery above it.

As the compression of the artery above an aneurism has occasionally effected a cure, as it is less hazardous than an operation, and even when it fails, favours the subsequent cure with the ligature by causing a gradual enlargement of the anastomosing vessels, M. Dupuytren resolved on trying the plan, although the patient declared himself willing to submit to any treatment. With this view he placed his compressorium (which consists in a semicircular spring with a pad) at the upper part of the thigh, the patient being directed to favour the circulation by moderate friction.

On the following morning, January 18, he earnestly prayed for the operation; since the application of the pressure he had been tormented with a dull, disagreeable sensation, not amounting to pain, which he compared to the creeping of ants, and which had prevented him from sleeping. The thigh was cold, heavy, and insensible. As no benefit could be expected from this mode of treatment, M. D. resolved on the operation. He accordingly made an incision at the inner edge of the sartorius, and exposed the sheath of the vessels. Having carefully opened it, and separated the vein and nerve from the artery by means of the knife handle, he passed a director under the latter vessel, and by that means carried a probe under it with two round ligatures, of which only one was tied, and the other left in the upper angle of the wound as a ligature of reserve. During the last five years, M. Dupuytren has operated for aneurism twelve or fifteen times, without the occurrence of secondary hemorrhage, and consequently, without being obliged to tighten the ligature of reserve. During the operation, but little blood was lost; the swelling ceased to pulsate, and the temperature of the limb sunk a little.

The patient slept soundly during the night; the thigh was moveable, warm, and sensible. Every thing proceeded favourably until January 21, when a pulsation became again perceptible in the tumour, and could be traced in the course of the artery to the vicinity of the ligature, which was quite firm and undisturbed: the pulsation seemed to be caused by large collateral vessels. For fear that the ligature might be detached by it, the compressorium was again placed above the wound, and the patient instructed to tighten it in case of accident. The wound was filled with a thin reddish matter—according to Dr. Spitta, a never-failing omen of hemorrhage: the quantity increased, so that on the 24th the dressings appeared as though stained with blood. The aneurismal swelling increased in size,

and the pulsation became stronger, extending even to the upper angle of the wound.

The compressorium was tightened as much as the patient could bear, and two assistants left in attendance on him. The hemorrhage might be expected to take place either from the upper end of the artery, or from the lower, by means of the communication of branches above, with others below the ligature; or lastly, at the same time from both upper and lower ends of the artery. The patient was kept perfectly quiet, and placed on a very low diet. He remained without alteration for some days.

About five in the morning of February 1st, he felt himself wetted by a very warm fluid, and soon found that it was blood. The surgeon in attendance found the dressings and clothes quite soaked with blood. The bleeding ceased when the wound was opened; the dressings were changed, and two assistants left at the bedside. At noon, a second hemorrhage took place, which the patient stopped with the compressorium. The artery was seen and felt pulsating very strongly in the upper angle of the wound, whence the bleeding came; the ligature was unmoved. On attempting to tighten the ligature of reserve, it was found to be so overgrown by granulations as to be quite useless. Such being the case, M. D. resolved on tying the artery again, and even thought on tying the internal iliac, on the supposition that the bleeding might proceed from the lower end of the artery by means of the anastomosing branches of the profunda. However this might be, he tied the femoral a second time about three fingers' breadth above the wound, and near to the origin of the profunda. This operation stopped the hemorrhage directly.

On the following morning, at the same hour that the first bleeding took place, a third hemorrhage occurred in spite of the new ligature, which in a few minutes soaked through the dressings and bed-clothes. This evidently came from the under end of the artery, and was immediately stopped by pressure below the lower angle of the wound. The compressorium was fixed here, and the lower end of the wound left uncovered, in order to be able to detect the first appearance of bleeding. The third of February passed quietly: the patient, though extremely weak, began to take courage, and to speak again, which fear and debility had prevented him from doing on the two last days. At midnight hemorrhage again occurred, and it became necessary to tighten the compressorium still more, although, from the debilitated state of the patient, the point on which the pressure was made was almost gangrenous. This answered the intention; the bleeding did not return; the patient's strength and appetite

were improved on the next day. On Feb. 5, the dressings were changed, and the pressure of the instrument relaxed, though not before it had produced a tolerably large slough. On the 6th, the ligature in the first wound came away, and at the end of a few days, that of the second. The swelling diminished in size; the slough, which extended to a considerable depth, separated after a little time, and about the middle of May the man left the hospital perfectly recovered.

In the next case, a man aged 41, and slightly lame from the remains of a former complaint in the hip, slipped in walking, and felt immediately a pain in the calf of the leg, followed by a swelling in the ham, which pulsated and impeded the motion of the joint. Jan. 27, 1821, about six weeks after its appearance, it was larger than the fist, filling the ham, extending to the middle of the calf, and pulsating throughout; hence, probably the great branches of the popliteal artery, viz. the peroneal, anterior, and posterior tibial were included in the disease. The operation was performed as in the other case, with ease and little loss of blood. At the time of the operation, a slight cough was remarked: at the evening visit of the same day, M. Dupuytren remarked the animated appearance of the patient, with the unusual vehemence of his expressions of gratitude, and gave instructions accordingly to the pupil in attendance. The pulse was frequent and rather hard. The state of the patient betrayed itself by a degree of restlessness which soon amounted to delirium. All these symptoms vanished after blood-letting, as if by magic; a tranquil night followed, and the patient awoke in the morning without any appearance of disease. The limb was sensible and warm, the swelling less by one half, and without pulsation.

On the following day, the patient complained of pain in the chest and arm, which yielded to a second bleeding, and the application of leeches. From this time every thing proceeded well, and he left the Hotel-Dieu in the middle of February.

An ostler was admitted into the Hotel-Dieu on account of an aneurism in the ham. Four months previously, he had remarked a small swelling which pulsated, and had increased so as to extend to the inner and even the front part of the thigh, being six inches in length. In this respect it differed from the sac in the other two cases, one of them being confined to the ham, and the other extending downwards on the leg.

As the patient had a plethoric appearance, some blood was taken from him, in consequence of which the size of the swelling diminished by one half, but returned in a few hours. On the next day, Feb. 28, the operation was performed, M. D. having

previously examined the course of the artery, a precaution which should never be omitted, from the possibility of the existence of more than one aneurism. In a case of that description, M. Dupuytren was about to perform the Hunterian operation, when he discovered a second aneurism at a considerable height above the popliteal one. In the present instance, the extension of the sac upwards rendered it necessary to make the incision at the edge of the sartorius, high up. When the muscle was thrust aside, the artery was exposed with its vein and nerve: it was carefully separated from them, and a probe and ligature passed under it; the ligature of reserve was omitted. When the ligature was tightened the patient complained of pain, a circumstance which Dr. Spitta has remarked in almost every case, even though the nerves were most carefully separated. The pulsation immediately ceased; every thing proceeded favourably; the ligature was speedily detached, and the patient soon enabled to leave the hospital.

HERNIA.—According to Dr. Spitta, the general treatment of hernia in France is characterized by a rigorous adherence to the antiphlogistic system, particularly by copious general blood-letting, whilst the cold applications so generally employed in other countries are almost wholly neglected, and supplanted by warm fomentations—a measure which Dr. S. considers not only useless, but injurious, by favouring the afflux of blood and the occurrence of inflammation. On the contrary, he thinks highly of the tobacco injection, from his experience of it in many cases, and believes that an antispasmodic treatment, particularly soon after the occurrence of strangulation, is attended with much better effects than the common antiphlogistic one. On the same principle, he prefers the application of leeches to general bleeding. He insists on the danger of long continued or forcible attempts at reduction—a practice, as he says, little likely to be employed by any one who has felt the firm constriction made by the abdominal ring or neck of the sac, often so considerable as not to admit the introduction of the finest probe at the time of operation.

A man, aged 42, had a scrotal hernia, which he kept reduced by means of a truss. On the evening of Jan. 31, 1821, in the act of straining at stool, the rupture protruded, and resisted all his efforts at reduction. A surgeon called to his assistance attempted the taxis but for a short time, as in the few hours which had elapsed the tumour had become very painful. He was bled, put into the warm bath, and injections administered, but without success. The colic increased, and extended through the abdomen; nausea and vomiting appeared; the pulse was small,

hard, and quick; he passed the night without sleep, and in great pain. On the following morning, Feb. 1, he was taken into the Hotel-Dieu, disposed to submit to any thing that might relieve him. M. Dupuytren resolved on the operation. After the tense and inflamed scrotum had been divided from the abdominal ring to its lower part, the sac appeared, which, besides the protruded parts, contained the testicle. An incision cautiously made into the sac allowed the escape of a small quantity of fluid, and exposed a portion of omentum swelled, red and hard. Behind it lay a loop of intestine, three inches long, of a brown red colour, and highly distended with air and fæces. The stricture was divided by a bistoury passed sideways on the forefinger into the ring, and then turned with its edge upwards. The protruded parts were so closely embraced by the stricture as to render the introduction of the finger rather difficult. When the ring was divided, it was discovered that the neck of the sac formed a second stricture: this was divided in the same manner as the former. The air and fæces in the protruded parts were then gradually expelled by gentle pressure, and the gut immediately entered the abdomen. The omentum was then replaced, and the wound lightly dressed with charpie and cerate. The patient was put into bed, and M. D. ordered him to be bled in an hour, and again at the end of three more. An injection was given, and a warm bath in the course of the day.

In spite of the bleeding, of repeated injections, and the use of the warm bath, the constipation and vomiting continued obstinately during the two next days, and the pains rather increased than diminished: pressure on the abdomen gave great pain. The pulse was small, quick, and hardly to be reckoned; and the sunken countenance and cold extremities of the patient afforded a very unfavourable prognosis. Another bleeding (the fourth from the occurrence of strangulation) was ordered, forty leeches applied to the abdomen, and he was put into the warm bath. Calomel also was given in considerable doses, so that by the next morning, Feb. 4, he had taken 24 grains with the effect of putting a stop to the vomiting, and procuring relief by the expulsion of flatus, though without any evacuation. By the continued use of calomel and the warm bath one offensive stool was procured on the next day, Feb. 5, with but little abatement of the pain in the abdomen, which was greatest about the wound. The warm bath was continued, and in the evening of this day he took ten grains of calomel at a dose, which produced two motions in the night. During the next 24 hours he remained in a very doubtful state, and the danger of the abdominal inflammation by no

means abated; the abdomen was tense, and still rather painful; the pulse small and frequent, the countenance sunk and pale.

Feb. 7th, a sudden improvement took place; the bowels acted regularly; he had slept soundly; the belly had fallen, and become soft; the pulse rose, and the skin was moistened by a general perspiration. A swelling appeared in the right iliac fossa, which Dr. S. has remarked in similar cases, and attributed to a chronic inflammation of the protruded omentum. It generally ends in suppuration, and may be detected by a copious discharge of matter through the abdominal canal. Occasionally this matter is effused into the bag of the peritoneum, and gives rise to a very fatal form of abdominal inflammation. From this time the patient began to recover, and was soon in a condition to leave the hospital.

A woman, aged 30, had for some time had a femoral hernia on the right side, which occasionally came down, but was easily reducible. One morning she felt suddenly colicky pains, with an inclination to go to stool. A portion of intestine had probably come down at this time, and more was protruded by the attempts at evacuation, the tumour becoming quite irreducible, and very painful. She continued in this state until evening, and then came to the Hotel-Dieu. The tumour was very tense and painful, but vomiting had not yet appeared. The objections of the patient, and perhaps the recollection of some cases in which enteritis proved fatal, although the operation had been performed a few hours only after the occurrence of strangulation, induced M. Dupuytren to wait until the morning, and to order a bleeding, a warm bath, and a tobacco clyster. In the night, the pain in the abdomen became extremely violent; the patient, in a state of desperation, attempted to reduce the hernia, and, all at once, succeeeded, but without relieving the symptoms. It was suspected that the sac and hernia had been returned together, without removing the stricture. A second bleeding, and a warm bath, were ordered, but although the pains were thus diminished, no evacuation took place. By the use of repeated injections, and large doses of calomel, first flatus, and then fæces were expelled with relief to the symptoms.

Even at the time that the patient left the hospital, a large, and rather painful swelling remained in the right iliac fossa, which was probably formed by the hernia included in its sac.

A man had been long subject to a femoral hernia, which sometimes descended, but could be easily reduced. The parts protruded on the morning of Feb. 16, 1821, and his own

attempts failing, the patient entered the Hotel-Dieu in the evening. M. Dupuytren found a hard tumour, which resisted the taxis, and was attended with pain, constipation, nausea, and vomiting. The man obstinately refused to submit to an operation, and wished for the employment of purgatives. In the existing state of the intestinal canal, these were considered as dangerous, and, instead, he was twice bled, and put into the warm bath. In spite of these, and similar measures, the symptoms increased during the next day; the hernia became so painful as not to allow the slightest pressure; the abdomen was distended, and the course of the intestine, filled with flatulence and fæces, could be traced by its external protuberance, the nausea and vomiting became more urgent, the pain in the abdomen increased, and it was not until the morning of Feb. 22, when his sufferings had reached the highest pitch, that the patient consented to an operation.

Persuaded that gangrene must have taken place in the protruded parts, and that their reposition would be injurious, M. Dupuytren cut directly into the tumour, with the view of making an artificial anus, the most favourable result that could be looked for. When the sac was divided, no fæces escaped, but a very offensive fluid, such as is commonly found near gangrenous parts. The omentum next appeared, of a greyish yellow colour, and in a state of gangrene; the greater part of it was cut away, without any bleeding. Behind it lay the strangulated intestine, which appeared gangrenous, and discoloured; a few spots only seemed not to be dead. It was opened with scissars, and according to M. D.'s usual practice, an attempt made to pass a female catheter into the upper portion, in order to facilitate the escape of fæces. This was rather difficult, from some mechanical impediment, but was at last accomplished, when a discharge of fæces began, and continued from 8, *a. m.* to 2, *p. m.*, to the amount of five or six pounds. The patient felt much relieved, the symptoms diminished, the abdomen sunk considerably, he slept for some hours in the night, and on the following morning, complained only of great weakness. He took nothing but gum-water and weak broth. Constant evacuations were kept up by injections, and the abdomen fomented. The pulse continued soft and frequent, the countenance sunk hourly, and assumed the appearance characteristic of serious injury to the abdomen. The return of colic, with nausea and hiccough, gave reason to fear that its diminished violence depended less on the absence of disease than on the diminution of the vital powers. The extremities became cold, a clammy sweat broke out, the pulse

became still more frequent, and he died Feb. 26, four days after the operation, and eleven from the occurrence of strangulation.

The dissection on the following day shewed the omentum and the upper surface of the intestines covered with purulent matter, which was also effused in the dependent parts of the abdomen. Almost the whole course of the intestines was of a brown red colour, and much distended; the omentum was in part gangrenous, in part inflamed, and adherent to the protruded end of the intestine. Fæculent matter was effused into the bag of the peritoneum, although the utmost pains had been taken to prevent it. This unfortunate accident takes place more easily, in proportion as the strangulation and mortification of the intestine are situated nearer to the internal opening of the abdominal or crural rings; the reverse affords a more favourable prognosis in the formation of an artificial anus. In the neighbourhood of the hernia, the intestines were twisted in a spiral form, thus opposing a second obstacle to the course of the intestinal contents, either in the natural manner, or through an artificial anus. This condition was probably produced by the violent spasm of the colic, and the antisperistaltic motions which took place after strangulation, and is a point which has not hitherto received sufficient attention.

J. P. FRANK ON URINARY CALCULI.

In his account of urinary calculi, Dr. Frank, in as few words as possible, mentions those things only which chemistry and pathology have taught us concerning them, and which we ought to treasure up in our remembrance. The most striking of these we now purpose to lay before our readers.

If all the concretions of a stony form which have been found in the human body, were really stones, it might, with great propriety, be called a stone-quarry; for such concretions have been found in every part of the body, from the brain to the little toe; and even Hippocrates has mentioned uterine calculi. But it is the urinary organs which suffer most from such concretions. With the exception, however, of gall stones in urinary calculi, the analyses of the other stony concretions have not been prosecuted as yet with sufficient care, nor often

enough, to throw much light on the *general doctrine of the generation of calculi.*

Dr. Frank thinks that the stone is a disease much more generally diffused than at one time was imagined; and that it is unknown in those countries only where the catheter is little used, and where the diseases of the urinary organs have been not much attended to. Thus lately, at Vienna, more people have been cut for the stone in one hospital, in a year's time, than had been formerly in twenty years. Yet, after all, some districts are less subject to calculi than others; thus, at Gottingen, in two hundred and thirty dead bodies, of various ages and sexes, and almost all of the lower order, which he had dissected, a celebrated physiologist found only two urinary calculi. But at that place, gall-stones are much more frequent than elsewhere. We are told by an English physician, who had practised much betwixt the tropics, that urinary calculi are never met with in such situations.

It is well known that gouty people are more liable to stone than others, yet Frank himself, who, during 33 years, had an annual attack of gout, never had tophi, nor a single symptom of stone. But in those who are subject to urinary calculus, stony concretions have been often found in other parts of the body. Probably, the far greater number of urinary calculi have their origin in the kidneys; and, as experience has proved, far oftener in the left than the right kidney. The cause of this preference has not been satisfactorily explained. But a stone, more than six ounces in weight, has been found in the right kidney; and in the same patient, our author found both kidneys affected with the stone.

Urinary calculi are sometimes of a very great size. Our author tells us, that he had seen three calculi, whose joint weight amounted to more than three pounds. Their weight, compared to that of water generally, as 1.426.

The form of calculi is exceedingly various, depending much on their nuclei, and the figure of the place where they originate. Frank has seen a calculus, which was in a manner perforated through its middle; and which, having stuck in the neck of the bladder, and hindered it from being shut, had given rise to incontinence of urine. Their surface, also, is various; in some smooth, and in others rough. In some cases, it is quite thorny, and gives great torment to the patient; but here, a matter of a white, or other colour, according to the quality of the urine, very soon fills up the interstices of the sharp points, and brings relief to the unfortunate sufferer. Almost all calculi have a smell of urine; and their hardness depends upon its quality. Their co-

lour also depends on the nature of the urine, and varies from a whitish grey to a brown or pretty black colour; but when the calculus has left the bladder, and is exposed to the air, time makes a very considerable alteration on its colour.

It is well known that a solid body, of one kind or another, forms the nucleus of a calculus; yet it is by no means improbable that a condensed particle of mucus or lymph, or a clot of blood, may acquire the capacity of becoming a nucleus. It is generally, indeed, very solid; but, were it exposed to the air, there is reason to believe that it would become dry, and fall into powder, at least with as much ease as the calculus itself. This part of the subject, however, is so well known, that it is needless to enlarge upon it. There is sometimes a connection formed in the urinary organs, and lining them, which differs in nothing from calculus, but in wanting a nucleus, and is an incrustation exactly like that which appears on the side and bottom of a chamber-pot. As long as these organs are covered with their natural mucous liniment, so long do they resist the apposition of calcareous matter; but, if the secretion of mucus becomes morbid, or if the sides of the cavities become dry, rough, excoriated, or inflamed, and the urine be applied for a considerable time to such places, the above-mentioned incrustation may be apprehended. This, however, is a rare occurrence; at least to any great extent.

The premature division of any object of science which is not sufficiently understood, unless it be merely for the sake of arrangement, must be either injurious or useless: and on that account Frank rejects every division of calculi, except that which regards their situation, because that division is favourable to the delineation of their specific symptoms. In this place, he remarks, that the stone is sometimes hereditary, particularly in those families where the gout in the same manner has been prevalent.

As the stone produces such dreadful agony in most patients, it is a remarkable circumstance, that in some cases calculi have remained in an occult state, and though of great size, have not been detected till after death. Cases of this kind are numerous, and of these our author has given various instances. A Polish prince, in the 54th year of his age, had long laboured under symptoms of stone in the bladder. Several surgeons, both at Warsaw and Berlin, had sounded him, and declared that he had no stone. In July, 1804, he came to Vienna, affected with incessant hiccup, and there died. On opening his body, a calculus weighing seven ounces and six drachms was seen sticking in a sac, which had been formed on the right side of the urinary

bladder. The form of the caculus was like the pelvis of the kidneys. The pelvis of each kidney, and the ureter, were of large dimensions. The diameter of the left ureter was six times its natural size; and the internal surface of the bladder was gangrenous. Calculi were also found betwixt the coats of the bladder, though its inner coat was entire.

When the stone in the kidney is of large size, sharp, rough, or thorny, it is attended by symptoms very nearly resembling those of nephritis, if we except acute fever. Considering the age in which he lived, we must allow that Hippocrates has given us a very exact idea of the phenomena of renal calculus; yet his pathognomonic symptom, the appearance of sand in the urine, is often wanting: and our author has frequently seen a great deal of sand in the urine when there was no stone in the kidney; as in arthritic lumbago, where often a great deal of sand is passed, and where the pain sometimes even attacks the ureters. We ought, therefore, in a disease which is so often obscure, not to look to one symptom only, but to a great many, and in a particular manner to the causes which have preceded it. The chief of these symptoms are nausea and vomiting, much more frequently the attendants of renal calculus, than of simple irritation from lumbago. Spasms are also present, and very violent pain in the bowels, which is denominated niphritic colic. The pain, however, from stone in the kidney is constant and immoveably fixed in one place. It is rare that both kidneys are affected with stone at once, for in that case there would be a complete suppression of urine. When the pain is most exquisite, the urine passed is as clear as water. If the patient, during the time that the pain is less violent, have his mind irritated, or if he be driven in a carriage over rough stony roads, his torture is increased in a remarkable degree, and is frequently followed by bloody urine. A gentleman of Pavia, whom Frank attended in 1786, and who was affected with stone in the kidney, used, when in the erect posture, to pass urine at first of a milky colour, but which gradually became quite clear: but when he made water, lying on his back, it was limpid. But the urine of persons labouring under renal calculus, after it has stood some time in the chamber-pot, lets fall a white viscid sediment, which has the appearance of pus, and has a very disagreeable smell. This last has been called the *specific fetor of the urine.* Our diagnosis will be much surer, if neither hemorrhoids nor gout can claim any of the symptoms.

The passage of a stone from the pelvis of the kidney along the ureter is denoted, for the most part, by almost intolerable pain following the course of the ureter, by shivering, spasms,

hiccup, vomiting, retraction of the testicle, and torpor of the leg; and where much opposition has been made to its passage, the ureters, at their entrance into the bladder, have been found sufficiently dilated to admit a hen's egg. The symptoms of stone in the bladder, as they are common to other diseases, are always ambiguous, unless the presence of stone has been ascertained by sounding. The most remarkable of these symptoms are a frequent difficulty of making water, and a periodical or almost constant inclination for it; with an itching and pain at the glans penis, and foreskin, which obliges the patient to be constantly rubbing and handling his penis. The itching is attended by stiffness of the penis, and nocturnal pollution: there is a pain in the bladder, and all over the pubes. In men, the urine cannot be passed unless the body be in a particular posture; it frequently comes away in drops; at one time it is white, watery, and pale; and at other times it is red, and lets fall a mucous, viscid, thick sediment, which may be drawn into long threads; it is very warm when excreted, and it has a specific odour; but when the urine is flowing, it is often suddenly suppressed. There is a troublesome and almost constant feeling of weight at the perinæum, with a frequent desire of going to stool, though the fæces are passed in small quantity, and of a globular form. There is also much nausea, and very often vomiting. At first, the calculus in the bladder is not very hard; for sometimes little pits are seen in its side; and if these are seen in a stone at the time of extraction, it is a pretty sure sign that the bladder contains more than one stone.

In the living body it is not easy to distinguish the tumour of the prostate, occasioned by calculi, from other swellings or enlargements of that gland; and if its form be in any degree vitiated, the diagnosis of stone in the bladder is thereby rendered more difficult. The pain which attends a calculus, blocking up the urethra, is excessive; and, by causing a retention of urine in the bladder, ureters, and kidneys, it produces fatal consequences: but sometimes the calculus forms a diseased or fistulous passage for itself, and even sometimes slips down into the scrotum. Sometimes these calculi acquire a prodigious magnitude. One weighing nine ounces was taken from the perinæum and scrotum of a boy at Wittemberg. But sometimes large calculi have made their way along even the natural passage of the *male* urethra, of such a size, indeed, as almost to exceed belief. When the urethra has been torn by an improper application of the catheter, fistulous passages have been formed, in which calculi have originated. An obstruction of the urethra, occasioned by a calculus, may be mistaken for a stricture; but the difference of pain,

and the peculiar sensation propagated along the catheter, from a hard body to the hand, ought to form a sufficiently accurate diagnosis.

In judging of the presence of calculus in the bladder, the catheter or sound itself is not always to be depended on; for even great lithotomists, trusting to it, have performed the operation when there was no stone to be extracted. On other occasions, although there is a stone, the catheter, from various causes, has missed touching it; hence we are under the necessity of using, also, the assistance of the finger, introduced into the anus or the vagina, when we suspect that there is a stone in the bladder. The stone may also escape the catheter, when it is of small size, or when it is wrapt up in a great deal of viscid mucus.

The author now enters on the causes of calculi, and very justly remarks, that the opinions of our ancestors on this subject, are either lamentable, or ridiculous. It was at one time supposed that much depended on the diet of the patient, in the production of stone; thus, a celebrated lithotomist has observed, that he had cut many wine-drinkers, but not so much as one beer-drinker; and we are told that the Armenians, who drink wine, are subject to urinary calculus, whilst their neighbours, the Persians, who drink water, are free from it; yet, in opposition to the opinion, we may observe, that those persons who are in the constant habit of drinking water, strongly impregnated with minerals, are by no means more subject to calculus than those who drink water in its purest form. It would appear, therefore, that even in places where the disease is endemical, it cannot exist in any individual, unless his constitution be previously disposed to it; for if it depended on diet alone, all the inhabitants of a district, where the stone is endemical, would be equally affected, which is by no means the case.

Our author next gives a brief statement of the chemical proportions of calculus, and informs us that "Vir eximius Genevensis," (Dr. Marcet) had described and accurately distinguished nine different species of human calculi. But it is quite unnecessary for us to enter upon such a subject. Neither shall we discuss the opinion or theory of "Angliæ medicus conspicuus," commented on by "Vir Germanus et chemicus celebris," that the stone has its origin from *a morbid secretion of the mucous membrane of the urinary passages*, as it must be sufficiently well known to the majority of English practitioners. It is a theory, indeed, which is strengthened by a variety of concurring circumstances, and particularly by tracing the

remote causes of the disease: *mucous* congestions of the abdomen and urinary passages, in children, old people, and persons of sedentary habits, or infirm in health, and subject to gout, hemorrhoids, scrofula, stricture in the urethra, tumour of the prostate gland, and induration, or ulcer of the bladder. The above-mentioned opinion, however, our author is inclined to favour, although the generation of calculi is not restricted to mucous membranes; and although a calculus may originate without a nucleus. He observes, that when a foreign body gets access to any of the cavities of an animal, whether by accident or design, if it be not speedily extracted or expelled, it is surrounded, in a few minutes, by a fluid, which soon becomes coagulated, and which the sides of the living cavity have produced, in order to defend themselves from the irritation of the foreign body. On the same supposition, of a morbid secretion, varying in its qualities, he thinks, we may account for the very different strata so often occurring in the same calculus, and which certainly never could originate from the same healthy source. In short, it appears pretty evident, that no organ, in a healthy state, ever produced calculi. A fit of stone, as well as gout, is preceded, and accompanied by languor of the stomach, nausea, oppression, belching, and borborygmi; and the chemical proportions of calculus are not materially different from those of chalk stones, in gouty patients. Let gout, then, which produced a calcareous concretion at the great toe, seize the mucous membrane of the bladder—Why should it not, says our author, equally give rise, in that cavity, to a calculus? Frank certainly thinks, that the component parts of calculi, laid open to us by chemistry, are merely accessory to an animal principle, which is their connecting medium, and the *primum mobile* of stone; yet he acknowledges, that alkaline remedies administered agreeably to the hypothesis of the chemists have been useful in calculous disorders. Such is his opinion, which he leaves to be confirmed or rejected by experience, the only safe guide in medicine.

When children are subject to calculi, they generally sink under them, sooner or later. Adults bear the dreadful torments of the stone longer; but when the stone has grown to a great size, a surgical operation, the event of which is often uncertain, can alone relieve them. Those who are affected with urinary calculus are at the same time often troubled with gall-stones. It is the shortness and straightness of the female urethra, which render woman less subject to calculus than man; in fact, it is now found that

the female urethra can be so easily dilated, that probably lithotomy will never again be had recourse to in women. When, in calculous cases, a great quantity of mucous, purulent and fœtid urine is passed, we have some reason to suspect that the urinary passages are in a state of suppuration, or affected with schirrus. From the constant and violent efforts which are made to expel calculi from the bladder, the hemorrhoids become very painful, and swell to a great size, and there is often a prolapsus of the rectum, and even of the wound itself. It is even said that stones have made their way into the rectum, and have passed by the anus. But calculi have been generated also in the intestines, though oftener in the horse, than in man.

It is a melancholy consideration, that with the exception of lithotomy, which can apply only to the bladder, we have no cure for calculus. The dreams of physicians, with regard to the efficacy of lithontriptics, have long ago vanished. It was known, however, from the earliest times, that small stones were frequently evacuated with the urine, even without the use of medicine; and the more easily, the greater the quantity of urine. Hence, it was *natural* to have recourse to remedies which had the power of increasing the urinary secretion; and it was soon found that all the symptoms of the disease were aggravated by potash, and acrid diuretics, but that benefit was frequently obtained by drinking plentifully of some mild liquid, which was agreeable to the stomach, and also by the use of the warm bath. And patients themselves had observed, that the ease which they sometimes enjoyed for a long time from calculi was broken in upon as often as they ate freely of acrid, and not easily digestible food; or made use of spirituous liquors, or had their passions violently excited, or indulged too freely in venery, or over-heated themselves, or led a lazy and luxurious life. Physicians also had observed, that animal food, in moderate quantity, and particularly such articles as corrected acidity of the stomach, and kept the bowels justly open, were of great service. Hence, they had recourse to remedies which conduced to that purpose; and when the calculus occasioned severe spasms, they often, with great advantage, made use of anodynes, emollient fomentations, and glysters. And having found that natural evacuations of blood often relieved the burning sensation of the bladder and urinary passages, they employed general venæsection in such cases, or applied leeches to the region of the affected kidney, in the course of the ureter, on the perinæum, or to the hemorrhoidal veins.

Favourable reports were for a considerable time made of the *soap and egg-shell remedy*, the secret of which was purchased by the British government for £10,000.; but in a few years it fell into disuse, having frequently done harm, and occasioned a flow of bloody urine. It would appear, that the continued use of Venice soap, and lime-water, had the power of preventing the increase of the size of calculi, but none whatever in dissolving them. For 14 years, one calculous patient consumed every day half an ounce of soap, and three pounds of lime-water; but after death a calculus was found in his bladder, weighing eleven ounces. Physicians next administered carbonic gas, either artificially, or naturally, as it occurs in certain mineral springs. Frank observes, that, after having long used all these remedies, particularly the last, *he never had observed the solution of calculi, unless they were naturally brittle;* and that his experience, in this respect, was confirmed by that of eminent men in the profession. Small stones, indeed, were passed, but the same thing happened during the use of decoctions of wild carrot, or dog-rose seeds; or of juniper wood, or the root of Ononis spinosa, or of Uva Ursæ, in powder or infusion; and also, when no remedy whatever was made use of.

The absurdities of endeavouring to dissolve urinary calculi by a menstruum, which must pass through the circulation, is so evident, that some eminent French chemists thought of dissolving them by means of liquids, in such a state of dilution as to act on the stone, but so as not to injure the internal surface of that organ. Even supposing this, however, were to act on stones in the urinary bladder, it could have no effect on those of the kidneys; and we are but little acquainted with the specific sensibility of the bladder, or with the component parts of the stone, actually in it, to be able to make the liquor of injection of the proper strength, or of the requisite quality. Indeed, the difficulties of injection are so great in many other respects, that nobody, either in France or elsewhere, appears to have employed it. It is true that oil, of various kinds, has been used, but rather with the view of relieving pain than of dissolving the stone. And those who would inject lime-water, so far from acting on the stone by it, would only give additional irritation to the bladder, and excite it to greater contraction.

In a disease, where we are so very much in the dark, if we have at any time been enabled to alleviate pain, it has been more owing to the Hippocratic observation of what has been serviceable or injurious to patients, than to the theories or remedies of the chemists. The mischief occasioned by Goddart's drops, or spirit of turpentine, is on record; and it is gratifying to think

that the harsh medicines of the last century have now given place, in general, to a milder treatment.

The *first* thing to be attended to by those who are descended from gouty or calculous progenitors, or who have been liable to some symptoms of stone, is to subject the mind and body to a strict regimen, and to avoid the remote causes which very readily affect the predisposed: and the *second* is to remove or alleviate, as much as possible, the irritation occasioned by the presence of sand in the urinary passages, or by a calculus. The author now enumerates the various remedies that may be employed in aid of those two *indications;* but as his remarks on this subject, though excellent, are not novel, we think it needless to enumerate them. A *third indication* is greatly to increase the flow of urine by some mild remedies, which, by acting beneficially on the villous membrane of the stomach, may produce a favourable effect on the mucous coat of the bladder. Among these, the principal are the acidulated mineral waters, which often remove pain, and lessen the difficulty of making water, before they can have reached the urinary bladder, or have acted on the calculus. In the same way, by acting on the primæ viæ, we attempt to cure morbid secretions of mucus, in chronic discharges from the uterus, in pituitous phthisis of the lungs, &c. A *fourth indication* of cure has been mentioned, which consists in guarding against any new production of calculi; but Frank candidly confesses, that he knows no *specific* capable of doing this in a predisposed person. He ends his account of urinary calculi, by observing, that if lithotomy is expected to be beneficial it should be performed early; but, for the consideration of that subject, he refers to other authors.

Such is a faithful abstract of our author's observations on calculus. Much of it is not new, but all of it is valuable, and scarcely can be too often attended to by physicians. The style of the work is nervous, but in general not elegant, and frequently obscure. The obscurity, however, is not in the author's thoughts, but in the involutions of his words, and the uncommon length of his periods. When we find him, also, never deigning to mention any authors, but Hippocrates, by name, we cannot think him free altogether from affectation. We do not pretend, in every instance, to know the persons he alludes to; but *Summus Helvetiæ physiologus* must be Haller, and *Pergamenus Hippocratis commentator* must be Galen. "Sed ubi plura nitent paucis offendar maculis?"

CORNELIANI ON THE ABUSE OF BLOOD-LETTING *.

On November 30th, 1821, the author was called to the relief of Georgiana Cattaneo, who had been some days in labour: she was upwards of thirty, but had before borne children. The liquor amnii had escaped on the preceding day. On the first appearance of labour she had been bled, and that more than once. As the process advanced, a sanguineous discharge from the vagina took place, and the midwife, unable, after repeated examinations, to feel the head, concluded that labour was still distant. The patient became weak, the pains less powerful, and with longer intervals; repeated discharges of blood producing syncope, and threatening the life of the patient. When the author saw her, the face was sunk and cadaverous; the pulse small, frequent, and compressible; respiration oppressed and convulsive. The abdomen was neither tumid nor painful, but presented two tumours, of which one, in the left iliac region, appeared to be the head, the other, on the opposite side, the nates. Having ascertained, in an examination, per vaginam, that the chest presented, and considering the state of the patient, the loss of blood, and the soft dilated state of the os uteri, the author proceeded to turn, having first administered a cordial to the patient, and explained the danger to her relations. The operation was easy; but scarcely was the child extracted, and the patient placed in bed, before syncope ensued, and proved fatal. The child was dead and mal-formed; the lower extremities were contracted, and a tumour hung from the nates. The abdominal parietes were wanting, and their place occupied by the peritoneum, containing the viscera, and attached all round the abdomen to a thickened edge of the cutis; the funis was small, and had been torn before delivery; it was inserted close to the pubes: under the symphysis, which was divided, with the exception of a few fibres, passed the penis, small, and not covered by skin; below, the scrotum was divided vertically, and lastly there was a hare-lip.

In the second case, the author was called, Dec. 7, 1821, to Annabella Marca, who had been three days in labour. She was not 17, was pregnant for the first time, well formed, and strong. The midwife had, during this time, been unable to ascertain the

* Sull' abuso del salasso nelle donne in travaglio di parto; osservazioni scritte dal Dott. C. Corneliani, Chirurgo maggiore dello Spedale di Novi.

state of the os uteri. The abdomen presented two tumours; the one anterior on the right side, the other posterior on the left. On examination, per vaginam, the os uteri was found high, scarcely admitting a finger, but lax and yielding; the presenting part could not be felt. He left her for the night; and in the morning found the os uteri lower, more dilated, and the pains stronger. The attendant physician bled her largely; the blood was buffed, and the pains ceased. Towards noon, the pains became more severe; she was again bled, and they again ceased. The os uteri, which had begun to dilate, became more contracted. The pulse was frequent and quick. The pains returned again; the os uteri began to dilate, and the bag of the amnion to protrude. It was wished to take blood a third time; but this the author opposed, seeing that it had uniformly retarded the progress of labour. The pains continuing, the os uteri descended and dilated, in so much that the author thought right to rupture the membranes; the escape of the waters was followed by a protrusion of the funis, twisted and pulsating. Supposing that the belly presented, the author turned the child, which perished, however, from the compression of the funis. It was also necessary to extract the placenta, from its adhering to the front of the uterus.

On the 12th December, 1821, he was called to Bianca Tonelli, aged 26, well formed, strong, and mother of two children. On the 5th, symptoms of labour had shewn themselves. The physician ordered a large bleeding, which was repeated in the course of the day. The pains ceased, but returned in the night, and three, lasting together for a quarter of an hour, were sufficient to expel the child. The placenta was retained, and not yielding to extension of the funis, it was not thought right to extract it.

The patient remained in the same state, without pain or hemorrhage, until the seventh day, when the fetid discharge, arising from the putrefaction of the placenta, and the anxiety of her friends, made them desire the author's attendance, notwithstanding the assurance of the family physician and surgeon that matters would terminate favourably. The symptoms were pallor and tumour of the face, restlessness, a quick, feeble pulse, the belly flatulent, but soft and yielding; the uterus tumid, but not painful, and extending beyond the hypogastric region. The os uteri was soft and lax; it contained a substance which, from its surface and consistence, the author judged to be a part of the placenta. Seeing that no bad symptoms had occurred, he decided on leaving the expulsion of the placenta to the natural processes.

In the course of the night a violent convulsive tremor took place, succeeded by syncope. In the morning, the face was sunk, the pulse frequent and weak. During the convulsion, some clots of blood and a portion of placenta were expelled. At 11 *a. m.* a similar fit recurred, and the author, in conjunction with the other two attendants, thought it prudent to extract the placenta. On introducing his hand, he found that a portion of the placenta was embraced by an irregular constriction of the uterus. By introducing gradually, first one and then the other fingers, he ultimately succeeded in effecting the dilatation of the contracted ring of the uterus, and in gently removing the mass of the placenta. After this operation the uterus was felt behind the pubes, small and contracted. The state of the patient seemed much improved, and afforded a favourable prospect; but in a short time she was attacked with the same general tremor and chilliness. In spite of an anodyne, it returned on the following morning; the general depression increased, symptoms of a typhoid nervous fever followed, and destroyed the patient in spite of every medical assistance.

"We know," says the author, "that in addition to other circumstances, a certain degree of strength is necessary to effect the process of parturition, though in circumstances of threatening plethora, or the like, it may be necessary to have recourse to measures tending to remove these inconveniences. It is obvious that however useful blood-letting may be when justly indicated, it must be equally injurious when employed under opposite circumstances. The influence of custom," he adds, "is such, that women, on the first appearance of labour, without any advice but that of an ignorant midwife, cause themselves to be bled, and that many are to be found who obey implicitly and without any adequate cause."

In the first case, the patient was in a favourable state previous to the loss of blood, which, combined with the natural discharge, had the effect of deranging and retarding the labour, and it is to this circumstance, together with the neglect of correctly ascertaining the presenting part, that he ascribes the fatal termination.

In the second case, the effect of unnecessary blood-letting, in disturbing the labour, was equally striking; and it is probable that had it been repeated a third time, the case might have terminated very differently. In the author's own practice, bleeding has been very rarely required during labour, and only for the purpose of producing relaxation of the os uteri, when very hard; to moderate the pains when very violent and long continued; or to prevent cerebral congestion.

In the third instance, the same effects followed the same

causes; and the retention of the placenta, according to the author, is to be attributed to the rapidity of the labour. An easy delivery after a short labour is often met with in weak, reduced subjects, and attended by accidents, such as hemorrhage, syncope, convulsions, or irregular action of the uterus, giving rise to retention of the placenta. In such circumstances, hemorrhage is the consequence, if the placenta be partially detached, especially if it be not closely embraced by the uterus; and the propriety of removing it, or leaving it to the operations of nature, must depend on the absence or presence of threatening symptoms.

The cases above related present little to approve, and much to reprobate: the bad effects of a rash, empirical treatment are too obvious to require any comment. But the hesitation and irresolution of the professional attendants betray a lamentable ignorance of the most important principles which regulate the practice of midwifery.

Cuvier and Blumenbach on the Natural History of Man.

We have, in the following article, brought into a small compass a few of the more interesting particulars, in the several works of our distinguished authors, respecting the Natural History of Man, considered in a physiological and philosophical point of view; and though many of these may not possess novelty, we think it of importance to have them distinctly stated in an abridged form, for the use of those who may have neither opportunity nor leisure to consult the voluminous works whence they have been taken. The objectionable opinions of our authors, respecting the human soul, we have formerly discussed in our Review of the works of Barclay and Lawrence, in our 14th Number.

There is considerable interest excited even in the minds of children, by the history of the inferior animals; and with respect to other branches of Natural History it can be shown, that the seal alone, amongst certain tribes of mankind, furnishes almost every necessary of life, food, dress, lodging, and pastime. The rein-deer and the whale are exceedingly valuable in this respect, and without certain animals, such as

the camel, many extensive tracts of country would be uninhabitable. But, on the other hand, many animals are extremely noxious. Some others exhibit mental phenomena, which need only a due developement, to be on an equality with the human intellect. Their instincts too are wonderful; and the senses of many animals are decidedly superior to those of men.

In arranging the various kinds of animals, the zoologist is much indebted to comparative anatomy, as it shews an analogy between certain animals, which, in their external form, appear to be very different. Thus, the wings of the bat are shewn to be like hands; and thus, indeed, all the mammalia are proved to have a marked resemblance in their structure; and, although in every animal of the class the form may not have been completely developed, yet a certain common type or model, seems to have been adopted for every one of them. In the very singular formation of many animals, and their adaptation to various purposes, we may find many proofs of divine wisdom; but it must be allowed, that the opinions of men, with regard to final causes, are too often ridiculous; and such must always be the case when an erring mortal presumes to fathom the designs of the Almighty.

The zoologist, not confining himself to the living world, has examined the fossil remains of organized beings found under the surface of the earth, and has shewn that many of them are of a race different from our present animals; and his researches have still further shewn, that islands, and coral banks, of immense size, have been formed by the combined energy of millions of animals, individually insignificant. It is, indeed, from the analogies to be laid open by comparative anatomy, that we are probably to expect the future improvement of the healing art, rather than from the immense number of cases, many of them the echoes of each other, which now load the shelves of our libraries. Yet, from the difficulty of separating textures, often so intimately blended, that part of comparative anatomy, called animal chemistry, will probably remain long imperfect.

Life, according to our authors, is the active state of the animal structure, and can denote nothing more than what is apparent to our senses, and cannot, therefore, be applied to immaterial abstractions, or, what are commonly called spirits. Every action of a living being must have its organic apparatus; and thus there can be no thought without a brain. It is absurd, therefore, to talk of life as independant of an animal body. Must we, therefore, conceive that the giver of life,

the Deity, is an animal body? We have already entered fully into this question in our 14th Number, and shall not now revert to it.

The basis of our knowledge in this branch of our science must be physiology, on which the Elementa Physiologiæ of Haller is a matchless work. It is not a mere register of opinions, but strictly a work of new and accurate anatomy. Though published so far back as the middle of the last century, it is still in this country, the book of authority on physiology; in which opinion, we differ widely from that of Dr. Young; who speaks of, like a mere scholar, and not as an anatomist. Anatomy and physiology, indeed, are the ground-work of pathology; for if we are ignorant of the healthy structure of our frame, how can we know it in a state of derangement? In short, anatomy, physiology, morbid anatomy, and pathology, are but parts of one system; and they are all necessary to the rational improvement and extension of medicine.

In the study of physiology, too much scope has, in general, been given to the imagination of man, and too little to observation and experience. Yet, after all, we stand not in need of new facts; we rather are in want of some energetic mind, capable of arranging the facts which have been already assembled, so as to form the fundamental principles of the science of living nature. An animal body, in the opinion of Boerhaave, is an hydraulic machine; and all the physiological treatises of his time, are filled with mathematical problems, intended to illustrate the phenomena of life. Many things in the animal economy, it is true, may be explained upon mechanical principles; but, in many respects, the employment of such principles is productive of error and confusion; thus, for instance, one person has estimated the force of the heart as equal to 180,000 pounds, and another, to eight ounces. Many of the processes going on in the human body are chemical, and on that account some philosophers have attempted to explain, on chemical principles, the nature of our fluids and solids, both in a state of health and disease, and as variously modified by age, sex, climate, food, and mode of life. The condition of the urine, it is well known, when chemically examined, is an index of what is going on in the alimentary canal. Perhaps, also, the action of many remedies may be hereafter traced to chemical influence; but if a gland, a membrane, a muscle, or a bone, be chemical instruments, their analogy, to those of our laboratories, is so remote as scarcely to be perceptible. But the phenomena of life cannot be explained, either upon chemical or electrical principles. The

physical sciences, however, are useful to the medical student, as they accustom him to close reasoning, and guard him against the illusions of imagination.

Living beings are distinguished by the powers of sensation and contraction, and by the properties of the capillary vessels; but of these we know nothing more than that they are connected with certain organic structures. Some hold, that the body is enabled to exhibit vital phenomena, by having an immaterial principle superadded to it; but this opinion, according to our authors, can be of use to him only who is conversant with immaterial beings. But innumerable have been the opinions on this subject; all resting upon the same proof, the simple assertion of the inventor. The physiologist, however, who is conversant with Natural History, is fortified against the reception of mere hypothesis. The situation, figure, and size of parts, should be learnt from man; their uses and motion must be drawn from animals; and thus, we are enabled to demonstrate the circulation of the blood, and the real nature of digestion.

In living beings, there is a constant internal motion, during which the body is undergoing a change, from the admission of new, and the expulsion of old particles; and whilst this motion continues, the body is said to be alive: when it ceases, the body dies. Death, according to Cuvier, seems to occur as a necessary consequence of life.

Nature has made it a fundamental law, that no two of her productions shall be exactly alike; and this variety is the source of every thing beautiful and interesting in the external world. This would argue, that it is impossible to make mankind act or think alike; and if it is impossible to make all Christians followers of one sect, it must be equally so to banish religion from the world, and make mankind universally a society of atheists. But our authors, not very consistently we think, foresee the destruction of all creeds, or articles of faith.

The division of animals into varieties, species, genera, orders, classes, and departments, enables us to describe any natural object distinctly, and in a few words. Thus, we say, that the dromedary belongs to the genus, camelus; order, ruminantia; class, mammalia; and department, vertebralia: and if a person be acquainted with the above names, he thus forms a notion of the animal, which he could have otherwise received only from a long description.

In the scale of living beings, man is at one end, and the microscopic point, of which one thousand are found in a drop of fluid at the other: and the intermediate gradations are all

regularly connected with each other; descending from the most perfect to the most simple organization. Of this our authors have given many proofs. They show that exactly as the organic parts are diminished in number, and simplified, the vital phenomena become fewer and more simple. They think that, as bile is produced by the liver, digestion by the stomach, and urine by the kidney, so is thought by the brain: and in this we might agree with them, if thought could be detected in the brain, and make its appearance in a tangible form. But if we inquire into the production of things, we shall find them all equally incomprehensible, from the formation of a maggot in putrid flesh, to the production of a Newton or a Franklin. In the examination of these matters, the utmost freedom of discussion should be allowed. Error alone needs artificial support: truth can stand by itself. They suppose mind to be an attribute of matter, because it declines with the decay of organization, and because, when the organization is imperfect, the mind also is imperfect: thus the mind of a Negro, Hottentot, Carib, or Kalmuck, is inferior to that of an European. If we refuse an immaterial principle to animals which shew astonishing degrees of reasoning, we must equally refuse it to man. In their opinion, every degree of insanity depends upon derangement of the brain as a material organ; insanity having the same relation to a diseased brain, as indigestion to a diseased stomach, or as cough and asthma to diseased lungs. When there is stupor, from the brain being compressed by external force, or when delirium arises from its being inflamed, we do not, they say, attribute these disorders to the inflammation of an immaterial principle, or to its having suffered pressure. In these diseases, vigorous medical treatment is as essential as in the diseases of any other organ. This is true; but it is the belief of most men that the mind, or the intellectual principle within us, is affected in these cases sympathetically, from its intimate connection with the body.

We come next to the inquiry, if man is a species broadly and clearly distinguished from all others, or if he is specifically allied to the ourang outang, or other monkeys, or if there is but one species of man? If there is but one species, what country did it first inhabit, and what was the appearance of the original man? Did he go erect, or on all fours? The natural history of man has been much neglected. Even intelligent and scientific travellers, who have been accurate in their description of dress, arms, ornaments, &c., have altogether neglected man. The unsupported assertions of Rousseau and Monboddo show that they were altogether unacquainted with zoology and physiology, on which alone a correct opinion on this subject can be founded.

The human race has numerous distinctive marks, by which it is separated in every respect from all other animals, and even from those which in external appearance have most resemblance to man. Here we cannot too highly praise our authors, together with Buffon, Zimmerman, Meiners, Soemmering, Ludwig, Hunter, Kaimes, and Pritchard, for their researches into the history of man.

From the formation of the feet and pelvis, it is evident that the erect posture is not natural to monkeys; but though they are not biped, neither are they strictly quadruped, as their fore limbs have more the resemblance of arms and hands than legs and feet. The simia satyrus, or true ourang outang, has a forehead much resembling man's, it being large and high, and the facial angle very considerable; indeed, no animal resembles man so much as this. It has also some appearance of human feelings, and quickly imitates our actions. That formidable creature, the pongo, is probably only the adult ourang outang, which comes to us young, and is probably stinted in its growth by confinement. The chimpansee is an ourang outang of a smaller size, and more like the monkey. These three have been called wild men, but as yet we are little acquainted with their natural history, particularly with regard to the brain. Our authors deserve credit for the zeal with which they have defended the native dignity of man, in placing him by himself, totally unconnected with all other animals. Man is a genus consisting of but one species, with several varieties. The characters are—erect stature; two hands; teeth approximate, and of equal length; the inferior incisors perpendicular; prominent chin; rational; endowed with speech; unarmed; defenceless.

Owing to the circumstance of some children having been lost, and afterwards found in a wild state, running on all fours, it has been pretty generally believed that man was naturally quadruped; and this must have been the case with the wild man Peter, who was little better than an ideot. In all the monkey tribe, not even excepting the ourang outang and chimpansee, the lower limbs are short and weak, and manifestly inadequate to the support of the body in an erect posture; and this itself would be sufficient to distinguish man from the tribe of monkeys. To the long and powerful thigh-bone of man, to his strong tibia, and the broad articulating surfaces which join these at the knee, we can find no parallel among animals. The feet also are broader, stronger, and more solid, in proportion to their size, than those of any other animal: the single bone of the heel is an infallible characteristic of man. The distribution, also, of the muscular masses correspond to the organic arrangements of

the skeleton. The very bulk and power of the glutæi muscles afford a clear proof that man was designed for the erect attitude; and the glutæus magnus, which is the largest muscle in the human body, is so small in animals, that it may be said almost not to exist. The calves of the legs can be ascribed to man only. The immense bulk of the sacrum affords also another proof; and the whole arrangement of the thorax corresponds to the erect attitude of man: whereas, the erect attitude in any other animal, from the formation of its parts, must be unsteady and irksome to it.

To the human hand the animal kingdom offers no corresponding member, which, by its tapering flexible extremities, is admirably adapted to works of the most intricate description; and by the manner in which the hands are attached to the trunk, we have the freest use of these admirable instruments. The great superiority of the human hand consists in the size and strength of the thumb: for although the simiæ possess hands, in every one of them, the thumb is short, weak, and slender. All these creatures can, in fact, be called neither biped nor quadruped, but are quadrumanous or four-handed; their feet being instruments of prehension, as well as their hands. The simiæ neither go erect, nor on all fours, but live generally upon trees, and are strictly, what Cuvier calls them, climbing animals. If they walked erect, the action of one of their principal muscles would be impeded, as its tendon passes over the heel bone into the sole of the foot. By the power, therefore, and the arrangement of parts conducive to the erect posture, man is distinguished by a wide interval from all other animals.

Animals approach more nearly to the use of reason, in proportion as the mass of medullary substance forming their brain exceeds that which constitutes the rest of the nervous system. Man combines the largest cranium with the smallest face; and animals are stupid or intelligent, in so far as they approach or deviate from this standard. Our authors very properly doubt that the facial angle affords any correct indication of the state of intellect.

What a contrast there is betwixt the face of man and the brute! the former is the index of mind—the latter merely an instrument to procure food, or a weapon of offence or defence. The face of man either attracts us by its gracefulness, or repels us by its frown. When to the human face is added the elevated and capacious forehead, the contrast with all the animals of the man-like class is complete, and the superiority of the human organization evident. It is the great projection of the jaws that distinguishes all other mammalia from man. But, sup-

posing that the human spine were placed horizontally, what have we to sustain the weight of the head? In such a position neither could the eyes be raised sufficiently upwards, nor could the jaws be lowered to the ground, without the forehead first touching it. But the absurdity of the horizontal posture need not be insisted on.

The difference of stature betwixt man and the animals that most nearly resemble him is remarkable. They are generally under three feet. Travellers, indeed, talk of some being six feet, or more; but probably these accounts are not accurate. But although their stature is much more diminutive, their arms are generally much longer than those of man. The bodies, too, of these animals are universally hairy; the smoothness of his skin being a characteristic of man. The internal faculties of man are his great distinction, and make amends for his want of natural covering, and of organs of defence. By possessing these faculties, he is undoubtedly the first of living beings; and indeed he is distinguished from all other animals by the prodigious developement of his cerebral hemispheres.

Man is distinguished from animals by his being able to endure the greatest heat or the greatest cold: the first, if he use due precaution; the second, if he take enough of exercise. He is also capable of supporting great varieties of atmospheric pressure. He is also able to extract nourishment from all kinds of food: in cold climates we find him using, almost exclusively, animal food; in the equatorial regions, almost entirely vegetable. Courage was, at one time, thought to be the produce of animal, and cowardice, of vegetable food; but this opinion is shown by many examples to be erroneous. The teeth and jaws in man, and the immediate instruments of digestion, very much resemble those of the simiæ, all of which, in their natural state, are entirely herbivorous. It would, however, be a very difficult matter to determine what kind of diet is most conducive to the health and strength of man. It is his mind which enables him to live in every climate, and on every kind of food. The social state shows his pre-eminence to other animals; and that this state is natural to man, may be principally argued from his long infancy. The menstrual discharge, also, is peculiar to the female of the human race, and belongs to no other animal.

We may pass over the facts, which prove the superiority of our mental faculties, to any thing of the kind that can be observed in animals, and proceed to the question, What diseases are natural to man? It is no easy matter to answer this question, but it may be affirmed, that his diseases are numerous, only in so far as he has been accustomed to an arti-

ficial mode of life. The diseases of wild animals, or savages, are few in number. The mountain shepherd and his dog are healthy; the fine lady and her lap-dog are nervous and hysterical.

When we select strongly-marked varieties of man, we are inclined to believe in a plurality of species; but before we adopt such belief, we must survey the gradations by which one race of men is almost imperceptibly blended with another; and in examining this case, we must take into consideration what happens in animals, as to variety of species. The colour and form of the offspring very constantly follow those of the parents, but varieties do occur; and were two such varieties to cohabit, we may conclude that the variety would become permanent. It is found that the human skin exhibits every variety of tint, from the snowy whiteness of the most beautiful European female, or Albino, to the jet black of a Guinea Negress; but none of these gradations are common to all the individuals of any nation. Considerable variety exists in the colour, known by the epithet of white. The Albino constitutes a truly healthy variety, which, in all probability, might be propagated like others. In describing the colours of the human race, we fix on the most strongly-marked tints, in order to divide man into classes; and we shall find that such are white, yellow or olive, red or copper-coloured, brown or tawny, and black. By repeated intermixture, we have the power of changing one class into another, affording a complete proof that man is a genus consisting of but one species. The four coloured varieties of man have black hair, which is always stronger and coarser in texture than in the white variety. The colour of the eye, also, follows very generally that of the hair and skin; the iris of the Negro being the blackest we are acquainted with.

In features, as in colour, the different races are combined together by the gentlest gradations; although we should not think so, if the face of an ugly Negro were placed in opposition to one of the finest Grecian models. In the same manner, the form of the skull varies; but for the most part, one form is peculiar to whole nations, and corresponding to their features. A great expanse of the upper and anterior part of the cranium, denoting intellectual superiority, characterizes the Georgian, the finest model of the white variety of man; but in the Ethiopian, or black variety, the forehead is narrow, and slanting, the face is prominent, the cheeks and jaws are compressed laterally, and lengthened in front. It is the white variety, which in every age has shown a marked superiority

over the other races in civilization, and in the progress of arts and sciences. And the examination of mummies, found in the scpulchres of Egypt, shews how erroneous was the opinion of those men, who asserted that the ancient and enlightened inhabitants of that country were Negroes. They have almost all the characteristics of the white, or Caucasian variety. This class, or variety of man, includes the inhabitants of ancient and modern Europe, except the Laplanders and Finnish race, or of northern Africa, and western Asia. It is characterized by a fair, ruddy, or brownish complexion, by a profusion of curled, or waving hair, variously coloured; and by a large cranium, and small face. The face is oval and straight, with the features distinct, and beautifully formed; the forehead is broad and elevated, the nose narrow, and rather aquiline, and the mouth small; the front teeth of both jaws are perpendicular; the lips swell gently outwards; and the chin is full and rounded. The moral feelings and the intellectual powers are energetic, and susceptible of the highest culture.

In the second, or Mongolian variety, the skin is of a yellow or olive colour, and in many cases, very light; the eyes are black; the hair straight, strong, and thin; the beard small, or absent; the head inclining to a square form, with a small and low forehead; the face broad and flat; the nose small and flat; the cheeks round and projecting; the opening of the eye-lid long and narrow; the eyes oblique; the chin slightly prominent, the ears large, and the lips thick. The stature is inferior to that of the Caucasian variety. It includes the Nomadic tribes, which occupy central and northern Asia, as the Mongols, Calmucks, and Burats, &c.; the Chinese and Japanese; the inhabitants of Ava, Pegu, and Siam; the Finnish races of Northern Europe and the Esquimaux, extending over the northern parts of America, from Behring's straits to the extremity of Greenland.

In the third, or Ethiopian variety, in addition to what we have already remarked, the hair is woolly; the forehead low; the upper front teeth oblique, and the chin receding. The eyes are prominent; the nose broad, thick, and flat; and the lips, particularly the upper one, thick. All the natives of Africa, not included in the first, belong to this variety. The bones employed in mastication, and in forming receptacles for the organs of sense, are larger and stronger in this variety, than in those where greater civilization supplies the place of animal strength. Indeed, the head of this variety has much of the monkey conformation; but this is by no means

the constant form of the Negro head; for in many instances it is said to differ little from that of a European.

The fourth, or American variety, seems to form an intermediate link betwixt the Caucasian and Mongolian. The skin is dark, but with a reddish tinge: the hair straight and strong; the beard small, and the face and skull very like those of the Mongolian variety. The forehead is low, the eyes deep, and the face broad, particularly across the cheeks. The mouth is large. The features, however, are more distinct than in the second variety. The forehead and vertex are in some cases deformed by art. It includes all the Americans, with the exception of the Eskimaux. No other variety has a forehead so little projecting as the American, nor is this an artificial deformity; although it is well known by the practice of the Caribs, and other Americans, that by pressure continued for some time after birth, the cranium may undergo an organic change.

The fifth, or Malay variety, intermediate to the Caucasian and Ethiopian, is characterized by a skin, varying in its colour from a light tawny to a deep brown, approaching to black. The hair is more or less coloured, and abundant. The head is narrow; the bones of the face large and prominent; the nose full and broad towards its extremity; and the mouth large. In this variety are included the inhabitants of Malacca, of the East India isles, of New Holland, and the islands of the Pacific. It is called the Malay variety, because most of the tribes speak the Malay language. This is not a well-defined variety, as it includes races very different in organization and qualities, but which are as yet too little known, to be satisfactorily arranged in any other manner. The whole five varieties, indeed, are in a great measure arbitrary; for among many Europeans and Negroes we might select skulls, in which it would be difficult to determine the predominant character. In the islands of the South Sea, many are like Europeans in countenance and head, and others like Negroes. The exact resemblance of the teeth, in number and form, in all the races of men, is a strong argument for the unity of the species. Blumenbach has conceived that there was a peculiarity in the teeth of the Egyptian mummy, different from all others; the cutting teeth being thick in their bodies, and resembling truncated cones. This is merely an accidental variety; for we have seen a native of Britain with molares instead of incisors in front: yet it is probable that such appearance of the teeth in mummies may have been owing to mechanical attrition.

We have the strongest proof that climate never could produce

the varieties of mankind. The Jews and Gypsies have retained their peculiar features in all ages and climates; and the Anglo-Americans are not inferior to their progenitors in beauty of form or powers of mind. It is possible that food, defective in quantity or quality, may deteriorate the human race, and thus form a variety; but the real causes of variety may probably for ever elude our search. The tatooed bodies of the savage, like the stars and ribbons of civilized mankind, are a sufficient evidence that he possesses vanity; but it is likely, that whilst his forehead remains flat, and the receptacle of his brain is small, not all the exertions of the Bible Society, or the Society for Suppressing Vice, will be able to ameliorate his manners, or improve his intellectual faculties.

In all the five human varieties, some tribes and nations are conspicuous for height and strength; others, for lower stature and inferior muscular power; but these are not owing to temperature, climate, situation, or mode of life. And yet such, even as Buffon and Robertson, hold out that America is unfavourable to the perfection of animal existence. Neighbouring nations, indeed, differ in stature remarkably, as the Kaffres and Hottentots. But what a variety, as to stature, we observe in animals of the same species, particularly the dog and the sea-horse?

In general, man propagates his like with undeviating regularity. We frequently observe a peculiar feature continued in a family for many generations. We may instance the family of porcupine men. Had this family been exiled to some desert island, a race might have been produced as different from us as the Negro. In this manner, also, diseases are propagated. And thus the Persian nobles have washed out the stain of their Mongolian origin by their frequent marriages with Circassian beauties. The ancient Persians, the Guebres, who never intermarry with strangers, are an ugly race. Indeed, it is only by selection, that a superior race of man can be produced. Even mental defects and qualifications are propagated. "Imperiosa gens *Claudia* diu Romæ floruit, impigra, ferox, superba: eadem illachrymabilem *Tiberium*, tristissimum tyrannum, produxit; tandem in immanem *Caligulam*, et *Claudium*, et *Agrippinam*, ipsumque demum *Neronem*, post sexcentos annos desitura."

Where the languages are poor, there is generally a corresponding poverty of intellect, and in that case no advances can be made in science. The cruelty and barbarity of man in the savage, or what has been called his natural state, afford

a most afflicting contrast to the picture drawn of his innocence by Rousseau; but, nevertheless, many of the Negroes have a kindliness of disposition which would do honour to the most civilized European. In speaking of the inferiority of the native Americans, our authors mean it only in common with the other dark races, for they will not allow that animal nature has degenerated in that continent. The Cherokees, Caribs, and Patagonians, are our argument against that. But the spirit of liberty seems only to have been known to these nations in whom the cerebral hemisphere have been fully developed; and it is only the opposite set of people, with flat brows, who believe that millions were made for the sake of one man. So think our authors.

The production of a Washington and a Franklin, in a country once inhabited by low-browed savages, is a proof that climate has no influence on the mind of man; and, indeed, Negroes, Americans, and Mongols, are scattered over every variety of climate. In Europe, too, we have many beings not superior to Hottentots or New Hollanders. The Negro, in his moral and intellectual character, is decidedly inferior to the European; but not more so than the other dark races. Some Negroes have even excelled in the mathematical and physical sciences, of which many instances may be given.

We may observe that climate, food, mode of life, and all the physical and moral causes which surround us, act powerfully on the individual, but do not change the offspring. Near the pole we have very dark people, where, if climate had any effect, they ought to have been white. But if climate had effect, how does it happen that the same sun which tinges the Negro black, should make the American only copper-coloured?

British Review.

Paris and Fonblanque's Medical Jurisprudence*.

It is a maxim of political economy, that the supply of any article is mainly regulated by the demand: we hope we shall not be accused of wandering out of our province, if we adduce the subject of Legal Medicine as an instance. It must be within the cognizance of our readers, that a very few years have elapsed since a period at which this science was almost totally neglected by the profession in this country, and when, as a necessary consequence, we were unprovided with works which could serve as sources of information, or standards for reference on disputed points; when, in short, we had not so much as a Manual that deserved the title. Happily, however, a sense of our deficiency in this respect has, of late years, very generally prevailed, and different attempts have been made with various degrees of success, to remove the opprobrium. In 1803, a Professorship of Medical Jurisprudence was instituted in the University of Edinburgh; in 1816, a valuable treatise was published by Dr. Male; and in 1821, Dr. G. Smith's Principles of Forensic Medicine appeared, of which we have already expressed our high estimation. We are now presented with a work, which, from the manner of its execution, and the extent of its details, leaves little to desire, and, to speak with moderation, places the condition of the science in this country on the same level that it has attained in others.

As it is manifestly impossible to comprise a review of all that is worthy of notice in the contents of three large volumes, within the narrow limits of an article of a periodical work, we hold ourselves perfectly excusable in directing our attention to some points in preference to others, more particularly as an indiscriminate analysis would involve the necessity of re-discussing points which have been amply noticed on former occasions.

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* Medical Jurisprudence. By J. A. Paris, M.D. F.R.S. F.L.S. Fellow of the Royal College of Physicians; and J. S. M. Fonblanque, Esq., Barrister at Law. In three volumes, pp. 440. 472. 153. with an Appendix, of papers, cases, &c. pp. 318. London, 1823.

A circumstance which distinguishes this work from others of the same description which have preceded it, and which considerably extends the sphere of its utility, is the greater attention paid to the legislative enactments and judicial practices which regulate the profession of medicine, and influence, directly or indirectly, the conduct and opinion of the practitioner, when called upon to assist in the furtherance of the ends of public justice.

In an ingenious Introduction we are presented with a concise view of the origin and progress of Legal Medicine in this and other countries (the German part of which we remark is rather deficient), together with a sketch of the plan employed in this instance. This may be pretty well understood, by stating, that the treatise is divided into three parts; the first, comprehending the enumeration of the different medical corporations, with an account of their charters, power, and privileges, together with the subject of medical police; the second, all those subjects connected with medical evidence, as applicable to civil and ecclesiastical suits, in which the order of the subjects corresponds with that of the progress of human life, from infancy to old age; the third, the inquiries which are necessary to medical evidence as applicable to criminal cases.

The College of Physicians.—A considerable extent is devoted to the consideration of the powers and privileges of this learned body. The decisions which have confirmed the right of the College to resist the claims of their licentiates to be considered as fellows, are stated at length, and certainly leave not a doubt as to the state of the law on the point, whilst its justice must, to every impartial man, appear equally indisputable. But whilst we admit the evidently fair proposition, that the fellows of the College should have the right of choosing those who are to participate with them in the privileges which they derive from numerous statutes and charters, yet we altogether question the natural justice and national policy of imposing the obligation of obtaining a license from that body as a preliminary to the commencement of practice, by an individual who has received his education and approval at any of the Universities legally recognized within the kingdom. We allow, in short, that the College of Physicians has a right, founded in law and justice, to confine its choice of Fellows to Members of the Universities of Oxford and Cambridge, although these are notoriously not schools of medicine; but we deny *in toto* the propriety of its interfering in the licensing of doctors of medicine of other Universities, on the authority of laws obsolete, and adapted to times and circumstances which bear no analogy to the present. We

admit, indeed, that an alteration of the law in this particular might require a modification of other circumstances, particularly an extension of the period necessary for obtaining a diploma in some of our northern schools of medicine, and a total abolition of the practice pursued in others, of granting such qualifications without examination.

Exemptions and Liabilities of Medical Practitioners.—By the 14th and 15th of Henry VIII. Fellows of the College of Physicians are exempted from being summoned to, or placed on assizes, juries, inquests, inquisitions, attaints, &c.; and by the 32d of Henry VIII. they and the Licentiates also are discharged from keeping watch and ward, from serving the office of constable, or any other office within the city of London.

Actions by and against Medical Practitioners.—A physician cannot maintain an action for his fees, for they are honorary, and not demandable of right. If a bond, bill, or note, were given for medical attendance, the consideration would be good, though the original fees could not have been recovered. If a medical practitioner assume the character of a physician without a diploma, he cannot maintain an action for fees, though as a surgeon he might have obtained compensation. If a medical practitioner undertake the cure of any wound or disease, and by neglect or ignorance the party is not cured, or suffers materially in his health, the medical attendant is liable to damages in an action of trespass on the case. And it seems that any deviation from the established mode of practice shall be deemed sufficient to charge the surgeon, &c., in case of any injury arising to the patient. In the recent case of Neale v. Pettigrew, a surgeon was held responsible in damages for the negligence and unskilfulness of his apprentice or servant.

Of the Preservation of Public Health.—It is not altogether easy to assign any sufficient reason for the striking neglect of this part of our internal policy, particularly when compared with the anxious and minute precautions employed in other countries. Much must doubtless be attributed to the spirit of our government, repugnant as it is to every thing which bears the appearance of intruding on the rights of individuals; and something, though we believe less than the authors suppose, to the spirit of independence and private exertion which secures the advantages without the inconveniences of legislative interference. The lamentable condition of Ireland during the last few years has clearly shewn the want of a system of medical police, and the defect has been remedied by a late Act, which enacts that officers of health shall be annually appointed by the inhabitants in every city and large town. We perfectly coincide with the

authors in thinking that some measure of this kind might be advantageously extended to the rest of the kingdom, and that a prospective enactment would be more politic, than to be obliged to legislate for the evil when its mischiefs had been accomplished. At the present time it is an indictable offence for any person to pass through the streets, or cause others to pass through the streets, even for medical advice, while they have the small pox upon them. The authors express their surprize that no public measures have been taken to check the propagation of venereal diseases, and very justly consider that such an attempt could not be supposed to afford encouragement to immorality; they incidently suggest that the attachment of a surgeon to every police office would be materially useful, and not very expensive.

Attention to cleanliness in cities, and to the purity of the waters by which they are supplied, has undoubtedly a great influence on public health, and forms a very important branch of medical police. Here indeed we may boast a vast superiority over every other nation in the extent and execution of the drains in all our towns, and in the ample manner in which they are generally supplied with pure water. There are two other points, however, which loudly call for reformation or regulation; we mean the practices of slaughtering cattle, and burying the dead in the very centre of our most populous towns. As to the former, independently of its obnoxiousness to the senses, it has a direct tendency to contaminate the air we breathe with putrid miasmata, and renders the passage through our streets not only disagreeable but dangerous. As to the latter, though less noticed, there can be no doubt that it must be highly injurious from the continued accumulation of putrescent matter at a small distance only beneath the surface of the earth; the authors state that "it is notorious that there are many church-yards in which the soil has been raised several feet above the level of the adjoining street by the accumulated remains of mortality; and there are others in which the ground is actually probed with a borer before a grave is opened. The Commissioners for improvements in Westminster, reported to Parliament in 1814, that St. Margaret's church-yard could not consistently with the health of the neighbourhood be used much longer as a burial-ground, for that it was with the greatest difficulty a vacant place could at any time be found for strangers; that the family graves generally would not admit of more than one interment, and that many of them were then too full for the reception of any member of the family to which they belonged."

To this head belong the arrangement and cleansing of

privies. It is well known that the emanations from them produce a species of asphyxia, to which the French workmen have given the name of *plomb*. According to M. Dupuytren, death sometimes takes place in a very short period; at others, the symptoms are less intense, and if the patients be carried into the open air they gradually recover. An emetic appears to be the remedy on which the nightmen rely for relief. These noxious effects are generally produced by sulphuretted hydrogen, sometimes combined with ammonia; though much less frequent than in France, these accidents occasionally happen in our own country.

We think it of importance to introduce here some abstracts from a Paris document of considerable interest, entitled "Rapport général sur les Travaux du Comité de Salubrité Publique," an account of which was published in the Medical Intelligencer for January.

"The duties of this council were the examination of the markets, of the rivers, of the cemeteries, of the slaughter-houses, of the streets, of the anatomical theatres, all sinks and drains, the public baths, every thing relating to medical statistics and to the bills of mortality; the means to be taken for increasing the health of public places, and for improving the lighting of the town. They were also intrusted with the care of putting down irregular practitioners of medicine, and of repressing all trades and avocations which could by any means compromise the public health.

"In spite of the extent and variety of business, which has every year been submitted to the council of salubrity, the reports which we have had the honour of addressing to you, and your predecessor, Count Angles, are only 301 in number. This number exceeds the number of the former year by 19, a difference so small, that it would be idle to search for the reason of it. Even this difference, however, is favourable. It proves that the industrious arts have not fallen off in activity, and if the labours of the council were more considerable, during the preceding years, the reason was, that new arts, till then unknown, had arisen amongst us, which presented questions of salubrity till then not thought of. Your committee has formed for itself, and its successors, a code of regulations on these arts, which, now better understood and better practised, either obviates or lessens all the difficulties.

"Of the 301 reports of 1821, fifty-five were concerning dairies about to be established, to be improved, or to be displaced. Twenty-four were concerning the distilleries for the extraction and rectification of spirits from wine and potatoes, and for the

making of other liquors. Six on the establishment of manufactories of syrup of potatoe starch. Six on sugar houses. Five on the carbonization of peat and wood. Two on the purification of coal. Two on the extraction and purification of hydrogen gas. Three on the purification of oil. One on the making of printer's ink. Thirteen on manufactories of candles, to be established, improved, or removed. Two on pig-styes. Two on a plan for insuring the life of horses. One on a plan for insurance against the danger of epidemics in cattle. One on mad dogs. The remainder were on the various arts of the starch maker, the brewer, the cat-gut maker, the washerwoman, the hat maker, and the carrier. The boiling of blood, of sheep's heads, and of tripe, has engaged the attention of the committee. To these may be added the manufactories of glue, of paste-board, paper, colours, white iron, japanned oil-cloths, printed cloths, of sulphate of copper, of soda, of iodine, cerusse, Prussian blue, potass, fulminating mercury, dye-stuffs, the purification of gold and silver, morocco, tanning, varnishing of leather, soap, and the establishment of steam-engines.

Besides all these things, the attention of the committee has been occupied with the different articles of the toilet and of cosmetics, dentifrice powders, aromatic waters, opiates, pommades, and compositions for blackening the hair.

The time and care of the committee have also been much engaged with the different quack medicines and secret remedies, as the vegetable epispastic taffetas, the universal antiseptic, Rowaix's remedy, Leroy's remedy, the essence of Chalais, the marvellous essence, &c. The continued sale of these medicines shews the indefatigable obstinacy of their proprietors, and demonstrates the imperfections and weakness of the laws, in repressing their daring criminality. This weakness is every where felt. It excites the activity of the quack; it diminishes the zeal of the good practitioner; and the resulting discouragement and apathy which seizes the useful and worthy members of society, form one of the most dangerous sources of mischief to the country."

General Recapitulation of the Cases of Submersion, during the year 1821.

I. *Number of persons taken out of the water, who could not be resuscitated*	234
Of the female sex.....	36
Of males	198

	Of these there were:	
	Children under the age of sixteen..	23
	Unknown	76
	Suicides in men	54
	Suicides in women.....	15
	Accidentally drowned	55
	Those who were less than 12 hours in the water	46
	Those who were from 12 to 24 hours in the water	23
	Those who were more than 24 hours in the water	165
II.	*Persons taken out alive, or resuscitated*	75
	Females.....	27
	Males	48
	Of these there were:	
	Children under sixteen	16
	Persons who wished to drown themselves	32
	Accidents	43
	Of the whole number that were taken out of the water, in Paris	157
	In the neighbourhood	152
	Medical assistance was given to.....	50
	It saved.....	37

"The cases of submersion, in the year 1821, amount to 309. In 1818, they were only 283; in 1819, they were 281; and in 1820, they were only 260. The report of 1821, then, is less favourable; it has too remarkable an excess above the others not to be observed. What is the cause of this excess? Does it depend on an increase of population? The opulence of Paris, the superabundance of means of occupation, the low price of provisions—every thing in Paris denotes a degree of prosperity, which excludes all idea of misery and want, but, on the contrary, gives rise to the supposition of great affluence among the labouring classes; to this we may add, that the accidents arising from bathing in the river, during the summer, have, in some years, been twice and three times as many as the largest number here quoted. This has generally happened during summers of extreme and long continued heat. But whatever may have been the case with regard to these 309 cases, 121 only had been less than twelve hours in the water; and of this number, 75 were saved, which gives us a proportion of nearly five to eight, or a little more than half. This result is the same as was obtained during the years 1818 and 1819. That of 1820, gave the more favourable proportion of three to four. But it is evident that, on a subject of this kind, considerable variation is unavoidable. The results obtained, depend on the compound ratio of the time the persons have remained in the water, and of their strength and resistance to the effects of the water. But the details given by M. Marc, sufficiently

show with what severity he superintends the minutest details of the office confided to him; and it is easy to see that this important and honourable branch of the public service will never receive its full developement, until the subscriptions of the public promote its prosperity. We have next a strong recommendation of an institution, like our Humane Society, to the public, and calling upon them to come forward to its assistance. We heartily hope that it may have the desired effect; but we fear that it will have the same fate as most appeals of this kind in France. The government has always done too much, and, by taking all charitable institutions entirely into its own hand, has destroyed the sympathizing spirit of the public.

"Another work to which the council has directed the attention of the government, although unsuccessfully, is the making accurate researches into the history of the persons who have committed suicide, whose bodies are exposed at the dead-house. This is suggested, not only with a view of prosecuting researches of pathological anatomy, but also in order to discover the causes of this crime. In carrying up our inquiries to the causes of the mischief, we shall lay open those hidden evils which exist among us, and which drive so many unfortunate wretches to the last fatal act of despair. Perhaps we may find, also, that there are some which the government might correct, prevent, or diminish. For instance, the ruin which follows losses at play is a frequent cause of suicide. Every principle of morals condemns gaming. But this is not enough. It is necessary that the catastrophes and ruin arising from its baneful influence should be collected and published, in order that the general precepts of morality should acquire due strength, that they should be engraven on the heart, and find their way into our legislature. If the council dared dwell on such objects, which seem a little beyond its proper province, it would endeavour to reform the general maxim, that there is not a single vice which does not act on the corporeal structure, as well as on the moral character, after the manner of a poison; and that every immoral institution is to the latter a most insalubrious one."

Quarantine, &c.—The question which has been most agitated, and which is most important, is—whether epidemical diseases be ever propagated by contagion? On the decision, it depends whether we shall consider quarantine, lazarettos, &c., as regulations injurious to commerce, and suggested by ungrounded apprehensions, or as measures ensuring the safety of the community by the temporary inconvenience of some individuals. With respect to the plague, the point seems to be decided in

favour of its propagation by contact, by the authority of a vast majority of those who are entitled to our confidence; and as a consequence it follows that its progress may be arrested by a vigilant system of police, cutting off every communication between the infected and the healthy. Such appears also to have been the case with the fever which lately prevailed in these dominions, particularly in Ireland. In the yellow fever, on the contrary, the weight of evidence leans decidedly to the opposite side, although the opinion is by no means universally received. There is every probability that the matter of contagion requires the aid of a certain state of the atmosphere, to give effect to its powers, and ensure its propagation; and it is only in this way that we can account for the appearance, course, and decline of certain diseases. It is doubtful whether filth and animal putrefaction can directly generate contagion; but we have every reason to believe that fevers produced by fatigue, &c., may be rendered contagious by such causes. These are the principal questions to which contagion has given rise, and it is incumbent on the practitioner to make himself acquainted with the facts and arguments relating to them. Of the lazarettos of the Mediterranean, the authors say that the best praise of their regulations is to be found in their success; for though twelve months never elapse but that the plague rages in some part of the Levant, or of the coasts of Barbary, the infection has seldom reached the coasts of Italy, France, or Spain. Terrible exceptions may be adduced, yet they may generally be traced to some clandestine violation of the Quarantine laws, rather than to their imperfect execution, as in the recent instance of Malta, where the cupidity of a smuggler introduced the pest into the island, to which he and his family fell the first victims.—Vol. I., p. 130. An attempt made before a Committee of the House of Commons, to disprove the contagious nature of the plague, totally failed; "and to those," says Dr. Paris, "who consider our long immunity from the plague a sufficient guarantee for our future security, it may be observed, that, although the island of Malta is, from many causes, much more exposed to this infection than Great Britain, yet it was free from plague for 138 years, a period exceeded in our own case by only sixteen years." We must pass over other less important branches of medical police, such as the adulteration of medicines, the sale of poisons, the regulation of bills of mortality, &c., and proceed to the second part of the work.

Of Medical Evidence.—In civil cases a witness will not be compelled to be sworn until his reasonable expenses are paid him. In cases of felony it is in the power of the Court to order

that his reasonable expenses shall be paid to any witness attending on recognizance or subpœna, and no allowance is made for trouble and loss of time, unless he shall appear to be in poor circumstances. On prosecutions for misdemeanors, and other cases not specially provided for by act of Parliament, the Court is not authorized to order a compensation to witnesses for their attendance.

It has been supposed that medical practitioners are not bound to divulge the secrets of their patients, reposed in them in the course of professional confidence; but when the ends of public justice absolutely require the disclosure, there is no doubt that the medical witness is not only bound, but compellable to give evidence. In the celebrated trial of the Duchess of Kingston, this point of medical liability was raised by Mr. Cæsar Hawkins, and determined by Lord Mansfield in the manner just stated. Vol. I. p. 160-1.

As to the manner in which a witness should deliver his evidence, the authors advise a middle course between garrulity on the one hand, and over-cautious reserve on the other; "he should," say they, "first answer patiently, distinctly, and tersely, the questions put by the counsel on both sides, the Court, and the jury; and if none of these elicit the whole truth, any material point remaining to be disclosed, the presiding judge will always admit and gratefully receive the additions or explanations which may be necessary to the ends of justice. Notes taken upon the spot, or immediately after a transaction, may be used by the witness to refresh his memory; the notes should be original, not copies; if there be any point in them which the witness does not recollect, except that he finds it there, such point is not evidence, for the notes are only to assist recollection, not to convey information. No man is bound to give any evidence by which he may render himself liable to any criminal prosecution; as in the case of a surgeon, present in his professional capacity, at a duel which terminates fatally.

Physiological Elucidations of Questions connected with Marriage, Divorce, or Nullity.—Age, especially that of puberty:—The authors adopt the division of human life into seven periods, viz. infancy, from birth to the seventh year; second infancy, from the seventh to the fourteenth or fifteenth year in boys, and to the twelfth or thirteenth in girls; puberty, from those periods to about the twenty-first year; youth; manhood; old age; advanced age. The most important of these, from its relation to many moral and legal questions, is puberty; it is marked in the male by the developement of the organs of generation, of the larynx, and of the whole muscular system, and by a series of

changes in the mental, not less remarkable than those of the bodily constitution. In the female, the evidences of the approach of this period consists in the enlargement of the breasts, in the appearance of the menstrual discharge, and in an increased size of the vocal organs, less evident than in the male. It is well known that this period in both sexes is by no means absolutely fixed, but relative and dependent on many unknown causes. It varies considerably, especially in the female, in different climates, and according to different habits of life. It is primarily dependent on the state of the organs of generation, and much influenced by their early or tardy developement, or by their removal. Of the former, we have instances in many well authenticated cases of premature puberty, and of the latter, in the effects produced by early castration in men and animals. Hence it is evident that puberty, by which we mean the adolescence of mind as well as body, cannot be determined singly by the number of years, or by the condition of the body, but most correctly by the combination of both.

Impotence.—Impotence may be absolute or relative only to particular parties; it may also be functional or organic. Organic causes of impotence in males: The total want of the testicles is now admitted to be certainly productive of impotence. Their absence in the scrotum is, however, no proof of their non-existence; they may be retained within the abdomen, a circumstance which Mr. Hunter supposed to be connected with some imperfection in their structure; having descended into the scrotum they may have been extirpated, or have been absorbed by a natural process after certain diseases. The structure of these organs may be imperfect, a circumstance only to be detected by dissection. Such may be the case also with the vesiculæ seminales. The orifice of the penis may be unnaturally placed, and such a malformation has been considered a cause of impotence, but many cases are recorded which appear to prove that emission with, or even without penetration, is sufficient to effect impregnation. Mutilations of the penis, not amounting to its removal, cannot be considered as necessarily causing impotence. In females, adhesion of the labia, of the vagina itself, tumours and polypi in it, arctitude, inversion, or prolapsus, and imperforation of the hymen, are among the principal organic causes of impotence. In both sexes this defect may depend on functional and moral causes, the operation of which it is difficult to explain.

In questions of LEGITIMACY and suppositious children turn wholly on points of law, and can receive but little illustration from medical evidence. It is often important to determine

whether a child born under particular circumstances lived after birth, as by the law of England, a man having living issue by his wife, who dies, is entitled to hold her land during his own life. In a case of this kind, tried in 1806, the medical witnesses differed as to what should be considered a proof of life. Drs. Babington and Haighton considered a twitching and tremulous motion of the lips as such a proof; Dr. Denman declared that the child was not born alive, and attempted to draw a distinction between uterine and extra-uterine life, and considered that the tremulous motion of the lips might arise from some remains of the former. The law, however, draws no such distinction, and on the ground that convulsive motions could not occur in a body devoid of life, the jury found that the child was born alive. We think the former opinion correct.

Conception and Utero-Gestation.—The signs of conception, especially when not taken collectively, are now admitted to be very uncertain, and at most, to afford grounds for probable suspicion. "History informs us," says Capuron, "that pregnant women have been brought to the scaffold, after an examination by medical men and matrons, who have declared the absence of pregnancy." Fortunately, however, the progress of time never fails to remove our doubts. The uncertainty of the signs of the existence of pregnancy is greatest in the early periods, and becomes less as it advances; but under any circumstances the practitioner will best preserve his honour and reputation who speaks with caution and hesitation. Many subordinate questions are connected with the consideration of parturition in a medico-legal view.

1. It cannot be doubted, that from the operation of certain causes, as diseases, narcotics, injuries of the head, a woman may be delivered in a state of insensibility, and remain unconscious of the event.

2. It is impossible to say positively how far the period of utero-gestation may be shortened, to be compatible with the future living of the offspring. As a general rule, the capability in an infant of living increases in the direct ratio of its maturity.

3. There are very few positive facts which tend to prove whether, and to what extent, the natural term of utreo-gestation can be extended. The variety of opinions entertained on this point by legislators and medical writers, sufficiently prove the absence of any adequate grounds for forming any conclusion; 280 days is the period ordinarily allotted to this process; but in the imperfect state of our physiological information, there is probably both justice and mercy in allowing of a moderate extension. The civil code of France

decrees 300 days to be the most distant period at which the legitimacy of a birth shall be allowed, a law which the authors consider as leaning to the side of mercy, rather than strict justice. The practice of our own courts of justice seems, however, to allow an equal licence in this respect, whilst their decisions are guided by the nature of the attendant circumstances in particular cases.

4. The value of the signs which establish the fact of a recent delivery depends altogether on their combination; collectively taken, they hardly admit of a doubt, whilst a reliance on any of them individually will almost infallibly lead into error. Much also depends on the period at which an examination is instituted after the occurrence of the supposed parturition. The authors limit the period at which the results of such an inquiry can be received as unexceptionable evidence to ten or twelve days.

5. There are certain diseases which may produce effects that bear a more or less close resemblance to the consequences of parturition, and that we think in a greater degree than the authors appear willing to admit. At the same time, there can be no doubt that in a great majority of cases the discrimination is not difficult.

6. We possess no adequate means of determining whether a woman has ever borne a child, at a period remote from that of examination.

7. The earliest and latest periods at which women are capable of bearing children are subject to considerable variety. Like other epochs in human life, they are relative, not absolute; the appearance of the menstrual flux and its cessation are the most natural standards. If we were to pay much attention to the miraculous cases recorded of parturition in very early and very advanced age, we should be led into many errors.

We pass over some remaining questions, which appear to be purely practical or physiological; as the possible number of children at a birth; super-fœtation; abortion; premature labour; the Cæsarian operation, &c.

Hermaphrodites. — It is now generally admitted that the recurrence of true hermaphrodites in the higher classes of animals is a mere creation of imagination. All the instances in which a double sex has appeared to exist in the same animal may be referred to malformation of various kinds, which Sir E. Home has divided into four classes: 1. Malformations of the male: 2. Malformations of the female: 3. Males with such a deficiency in their organs, that they have not the character and properties of the male: 4. A mixture of the organs of both

sexes, although not sufficiently complete to constitute double organs.

Idiots and Lunatics. — The laws of this country draw a distinction between idiocy, madness, and lunacy; idiocy being *dementia naturalis vel ex nativitate*, depending on defective organization; whereas madness and lunacy are *dementia accidentalis*, the former continual, the latter intermittent, whence its name from the supposed lunar influence.

"Among the legal disabilities," say the authors, "under which persons *non compos* labour, one of the most material to the medical adviser is connected with the disposal of property by will, and it is most peculiarly his duty to observe, whether the testator is or is not of sound mind, memory, and understanding, at the time of making his will; for it can scarcely be necessary to observe that many, who during the greater part of their lives have been of sound mind, gradually lose their faculties towards its close, and become liable to the impositions, restraints, and even cruelty of those about them. In such cases the medical attendant alone obtains access—it is to him, therefore, that the law will look for the detection, exposure, and defeat of frauds. An idiot cannot make a will, but a lunatic may during a lucid interval; and subsequent lunacy does not operate as a revocation."

Lunatic Asylums.—Although by the operation of the acts of the legislature, gross abuses are now of comparatively rare occurrence in these establishments, yet even at the present day instances occasionally present themselves, fully evincing the necessity of a constant and vigilant superintendence. The authors object to the proposed alteration in this particular, of transferring this task to a permanent officer, instead of the Commissioners appointed by the College of Physicians, as being more open to abuses.

In a medico-legal point of view, the questions which the practitioner may be required to answer on the subject of insanity, are four.

1. As to the existence and proofs of insanity. It is in doubtful cases only that these questions present any difficulty, and in them a decision can be formed only by patient and attentive observation. In a disease which varies so much in its characters, it is quite impossible to propose any signs or proofs that shall be absolutely conclusive; they are relative to particular cases, and depend in no small degree on the tact and skill we employ in observing and examining.

2. Whether the symptoms are such as to require restraint of person or property. Here the authors observe, that coercion

should never be employed but as a protecting restraint to guard the patient from doing mischief to himself, or offering violence to others.

3. Whether there has been any lucid interval and its duration. By the term lucid interval, we are not to understand a remission of the disease, but a total suspension of it—a complete, though temporary restoration of reason. In answering this question, we must be regulated by the same principles as in deciding on the existence of insanity.

4. Whether there is a probable chance of recovery, and whether it be likely to be permanent? The prognosis in this, as in other cases, must be guided by the circumstances; as the modification of the disease; violence, frequency, and duration; causes, whether moral or physical; age, sex, habit of body, and absence or presence of hereditary pre-disposition.

Impositions.—We proceed to the consideration of this subject, passing over nuisances, which afford matter for legal, rather than medical investigation.—Of feigned diseases. The objects proposed to be effected by deceptions of this nature are very various, and frequently very far from competent to recompence even physically those who have put them in practice. In general, a medical practitioner, well acquainted with symptoms, will find little difficulty in detecting the imperfection and inconsistency of the deception, though occasionally the task is more arduous, either from the nature of the assumed disease, or the consummate skill and address employed in carrying on the fraud. One precaution suggested by the authors should never be omitted; namely, that whenever the suspicions of a medical man are excited with respect to the sincerity of a patient's account, he should always endeavour to conceal them; for while the impostor is persuaded that the medical attendant is his dupe, he will be less on his guard; he should be questioned as to the origin, progress, and duration of the disease, its seat, intensity, and the effects produced upon it by remedies. Few impostors will be able to withstand such interrogatories without tripping; they will soon betray some incongruity in their statements, and enable the pathologist to elicit the truth. Vol. I. p. 356. For many extraordinary instances, we refer to the works of M. M. Foderé and Mahon, Mr. Hennen, and Transactions of the College of Physicians, Dublin. Vol. II.

Adulterations of Food.—The authors are inclined to believe that the alarms created lately on this subject are in many respects groundless. As regards the article of flour and bread, there is every reason to believe this to be the case, or at least

that the extent of the adulteration is much over-rated. The evidence of our senses, if we would confide in them, rather than in unproved assertions, would inform us that this fault is of rare occurrence. They are inclined to believe that the more serious and extensive adulterations in malt liquor are carried on by the publican, and not by the brewers.

Policy of INSURANCE on lives and survivorship are subjects on which the opinion of a medical witness is often required; in the first instance, as to the existence and probable consequences of particular diseases; and in the second, as to the influence of events in retarding or accelerating the approach of death. In the first instance our Courts allow a considerable latitude, requiring only that proof shall be given that the party on whose life insurance is made shall be in a reasonable state of health, even where there is an express warranty of good health. And even if the person, whose life was insured, laboured under a particular infirmity, if it can be proved by medical men that it did not at all, in their judgment, contribute to his death, the warranty of health has been fully complied with, and the insurer is liable. Vol. I. p. 383. In determining the probabilities of survivorship, the difficulties are much more considerable, and it is in a very small number of cases only that the information afforded by medicine and physiology can be successfully applied in making a decision. In no country are such questions more likely to occur than in our own, from the deficiency of any positive enactments, or well-established precedents. We agree with the authors in thinking that the order of nature affords the best general rule, and that therefore, in the absence of all evidence to the contrary, the natural succession should be admitted, as if no accident had occurred.

We now come to the third and most extensive division of the treatise—the enquiries which are necessary to medical evidence in criminal cases.

Of Arson.—The charge of arson, say the authors, may occasionally become the subject of scientific research, and the accused individual receive an honourable acquittal at the hands of the chemical philosopher, by whose interposition the conflagration, unjustly imputed to malice, may be proved to have originated from a spontaneous process of decomposition.

The principal sources of spontaneous combustion are friction, as in the case of machinery; the fermentation of vegetable and animal substances; and other chemical actions, as the accension of oils by various animal, vegetable, and mineral substances; ignition of lime by the affusion of water; ignition of pyrites, causes from which such accidents have frequently happened.

Human combustion is one of those phenomena so completely opposed to all our preconceived ideas, that without incurring the charge of improper scepticism, we have a right to look for unusually strong evidence before we yield up our belief. Ploucquet enumerates twenty-eight cases, and the journals of different nations present us with a variety of examples, all of which, with some slight shades of difference, appear to have been attended with the same phenomena; a fact, as the authors admit, affording internal evidence of their authenticity. On the other hand, say they, only one is related where the person survived for a short time, and gave an account of the manner in which he was struck with the fire: in none of the others has it been known in what way the fire commenced or proceeded. A circumstance which seems to prove the possibility of such occurrences is, that the human body, in its natural state, is remarkably incombustible, and that it is impossible to suppose that the bodies found consumed could have been burned by ordinary means. We are told, too, that in some of the cases the fire has little injured, or even not at all, the combustible things that were in contact with the body when it was burning!

Rape.—It is unnecessary to expatiate on the legal or moral atrocity of violation. In such cases the medical practitioner is frequently called upon to determine points of the most difficult and delicate description. Of all the questions to which they give rise, two deserve more particularly to fix our attention; namely, the external and obvious signs of violence; and the proofs of coition, whether voluntary or violent. In the greater number of cases, we do not hesitate to say that the former are the most important, and most to be depended on. Many motives may induce a female who has incautiously granted her favours, to make an accusation which it is often difficult to rebut; and it is not easily believable, except in cases of extreme disparity of strength, that a ravisher should accomplish his objects without the exertion of a degree of violence which could not fail to leave some permanent proofs behind. Another exception is in the case of children under that age at which the law supposes them capable of giving a consent. The proofs of coition, especially in those not virgins, are very imperfect; but it should be remembered, that it is in all cases of the first necessity that an examination, to be conclusive, should be instituted at the earliest possible period. The surgeon should be aware that in children the presence of mucous discharges, unsupported by concurrent circumstances, can have but little weight in establishing an accusation of this nature. They are naturally by no means of unfrequent occurrence, although occasionally giving rise to

unjust and unfounded suspicions. The authors advise, that the external signs of violence be enquired into upon the spot on which the crime is said to have taken place, that the state of surrounding objects may be determined. The existence or absence of the hymen, even in virgins, it is now generally admitted, does not authorize any positive inference. It seems probable, that, as the authors admit, medical evidence can never materially elucidate the fact, unless the crime be violent, and accompanied by material bodily injury.

Of Real and apparent Death, particularly as connected with Homicide.—If life, say the authors, be defined, that power by which organized beings are enabled to resist the physical and chemical operations of surrounding agents, it follows that death must be marked by the occurrence of the phenomena to which such operations, no longer controlled or suspended, will necessarily give rise; hence, putrefaction has been considered by many as the only certain sign of dissolution. The uncertainty of the period, however, at which this change occurs, has rendered it necessary to seek for other signs, which though less positive, are more easy of employment. They consist in the symptoms which indicate the cessation or quiescence of the functions which in fact constitute the whole of what we know of the succession of phenomena to which we apply the term life. The principal of those signs are the cessation of respiration, pulsation, sensation, and motion, together with the pale and livid hue of the body; the coldness of the surface, and stiffness of the limbs. To the skilful medical practitioner, we apprehend such signs must ever be unequivocal; but we are not prepared to say that a common observer may not sometimes be deceived by them. Many well established cases are known in which persons supposed to be dead have shewn signs of life, and even occasionally recovered. Of all the functions, the most indispensable is that of respiration, and the authors do not hesitate to assert, that it is physiologically impossible for a human being to remain more than a few minutes in such a state, as not to betray some signs by which a medical observer can at once recognize the existence of vitality. However slow and feeble respiration may become by disease, it must always be perceptible, provided the naked breast and belly be exposed, from the appearance of the alternate elevation and depression of the abdomen, and of the ribs with the sternum. The absence of pulsation, coldness of the surface, and stiffness of the limbs, are signs of much less value, as the presence of the whole of them is perfectly compatible with the existence of life.

Causes and Phenomena of sudden Death.—Bichât proved that

the occurrence of death in all cases was to be explained by the cessation of the functions of the brain, lungs, or heart, although it is difficult to determine which of these organs, in certain cases, is the first to fail in its office. When death is the consequence of interruption of respiration, Bichât shewed that this was, first, because the black blood which enters the coronary vessels, without being aerated in its passage through the lungs, is incompetent to support the powers of the heart, which consequently soon becomes inadequate to sustain the circulation; and secondly, because in the same manner black, instead of scarlet blood, is sent (as long as the heart acts) to the brain, the functions of which it deranges, and ultimately destroys. In death, by the cessation of the functions of the brain, the effects on the rest of the system may be produced through the medium either of the heart or of the lungs; through that of the heart, as in the case of injuries of the brain and of other parts of the nervous system, which, as was first explained by that able physiologist, Dr. W. Philip, may have the effect of immediately and permanently stopping the circulation; or, secondly, through the medium of the lungs, as when the injury of the brain is of such a nature, or in such a part, as to destroy or nullify the act of volition, by which the respiratory muscles are set in motion, and thus hindering the aeration of the blood in its passage through the lungs. In the last place, death from the primary cessation of the action of the heart, ensues generally because the other organs are unable to continue their functions when deprived of the supply of blood necessary for that purpose. These reasonings apply only to animals of the higher classes, and particularly when full grown. In reptiles and fishes, and in the young of mammiferous animals, this reciprocal influence and dependence of the three great centres of vital action is much less marked: the operations of any one of them may be interrupted without necessarily or immediately causing a suspension of the functions of the other two. As a physiological principle, we may state that the lower we descend in the scale of animals, and the earlier the period at which we observe the more perfect ones, the less is the mutual connexion and influence of the different organs, and the more nearly do individual parts approach to the possibility of existing independent of the rest.

Suffocation.—This term, in its popular sense, may be defined the destruction of life by the suspension of respiration, occasioned by external violence; and includes death by drowning, hanging, strangling, smothering, and noxious inhalation.

In drowning there is first a deep expiration, by which bubbles of air are expelled from the lungs; there is then an ineffectual

effort to inspire, there being no air which can be received into the lungs, and a spasm of the muscles of the glottis seems to forbid the admission of any considerable quantity of water into the trachea. The attempts to breathe are repeated several times, and at each attempt a small portion of air is expelled from the mouth and nostrils, until the lungs are almost emptied; the animal then becomes insensible, and convulsive actions of the voluntary muscles mark the instant when the brain begins to suffer from the influx of black blood. The body of a person killed by drowning presents the following appearances: the surface is remarkably cold and pallid; the eyes half open, the pupils dilated; the tongue is pushed forward to the edges of the lips, and sometimes wounded; and the mouth and nostrils are covered with foam. The quantity of water which enters the lungs is usually very small, from the convulsive action of the muscles of the glottis; were it to appear in any considerable quantity, the inference would be that it had passed in after death. As a general rule, it may be stated that no newly drowned body floats; putrefaction is necessary for that purpose.

In death by hanging, life is destroyed generally by suffocation, but sometimes by the injury to other parts before this cause has had time to operate completely; such, for instance, is the case when, by the violence of the fall, the cervical vertebræ are dislocated, and the spinal cord injured. The appearances after death by hanging are a dark colour of the lips, nose, &c.; distortion of the countenance; protrusion of the eyes and of the tongue; discharge of blood from the ears; evacuation of urine, fæces, and even semen.

After strangulation, the appearances observed internally will be the same as in suffocation from other causes, though perhaps not so conclusive, because, in consequence of the greater resistance of the sufferer, respiration and circulation may continue in some measure for a longer time than in hanging and drowning; where a person has been killed by manual strangulation, marks about the neck will probably be evident, and the discolouration will correspond to the fingers and nails.

Death by smothering is precisely the same as the preceding in the effects produced, differing only in the cause which remotely induces it. The same may be said of the inhalation of many kinds of gas, which act by depriving the lungs of their requisite supply of oxygen; others, on the contrary, independent of this operation, are absolutely noxious, and act as poisons, among which they must be classed.

Death by cold.—This subject has been investigated by Dr. Chossât (vide *Quarterly Journal Foreign Medicine, Volume III.*

p. 492.), and by Mr Brodie, who communicated his manuscript notes on this and other kinds of death to Dr. Paris. The former shewed, that in dogs death took place in the cold bath, commonly at 26° cent. (79° Fah.) though sometimes not until 17° cent. (63° Fah.). According to Mr. Brodie, cold lessens the irritability, and impairs the functions of the whole nervous system; it impairs the contractile powers of the muscles; it causes contraction of the capillaries, lessens the superficial circulation, and stops the cutaneous secretion; it probably destroys the principle of vitality equally in every part, and does not exclusively disturb the functions of any particular organ.

Our limits do not permit us to notice the succeeding subjects, namely, death by heat, lightning, starvation, &c.; and the application of these physiological facts to the general treatment of asphyxia; and we think it the less important, as many of them, though highly important, are but very indirectly connected with the subjects of the treatise.

Of Murder; and first, of Wounds.—The common division of wounds may be adopted, viz. incised wounds, punctures, bruises, lacerations, and gun-shot wounds; wounds may be, 1st, Absolutely mortal; 2d, Dangerous; 3d, Accidentally mortal; 4th, Not mortal. Every practitioner, however, must be aware that death will occasionally supervene on the slightest injury; and at other times, that the patient recovers in spite of the most serious and extensive mischief. In this country, the necessity for a nice discrimination of the degree of danger of any injury is almost done away with, by the Act called "the Ellenborough Act," which makes the offence of wounding, with intent to kill, capital. In his prognosis of the event of wounds and other injuries, it is unnecessary to say that the practitioner must be guided by the surgical principles which regulate his conduct in other instances.

Of Poisons.—The extent of this subject would render the attempt at following our authors through the consideration of each noxious agent futile. We feel the less regret, however, on this account, as the study of toxicology has lately attracted particular attention, and as the principal facts connected with it are generally known and easily accessible. We shall advert, however, to some questions touching medical evidence in cases of poisoning.

1st, May not all, or most of the symptoms, characteristic of the action of corrosive and narcotic poisons arise from causes of spontaneous origin? On this subject a striking difference of opinion was shewn in the medical evidence, on a well known trial for poisoning by arsenic, which occurred in Cornwall, in

1817. It would appear, that in the symptoms there is nothing which can distinguish the different causes of irritation in the primæ viæ, yet a discrimination may frequently be made by an attentive examination of collateral circumstances. It must be confessed that in the case of poisoning by narcotics, conclusions cannot with any security be drawn from the symptoms only.

2d, May not organic lesions, similar to those produced by poisoning, occasionally result from natural causes? The answer to this question must vary in different cases; inflammation, for instance, of the alimentary canal may be the consequence either of poisoning or of more ordinary causes. Its most important relation is to perforations of the stomach, which may be produced either by the process of digestion after death, or by the action of corrosive poisons. For a discrimination between the effects following these different causes, we refer our readers to Vol. III. p. 259, of this Journal.

3d, Is the rapid progress of putrefaction generally or locally to be considered as affording presumptive evidence of poisoning? The diversity of opinion on this point has been so great, that it may be assumed as a principle, that the fact of accelerated or retarded putrefaction cannot be received with any confidence, as a collateral indication of poisoning.

4th, How far is the absence of poison, or the inability of the chemist to detect it, in the body or the fluids ejected from it, to be received as a negative to an accusation of poisoning?

Although this circumstance, whether real or supposed, considerably weakens the evidence of the occurrence of poisoning, it by no means excludes the supposition of its possibility. Dr. Bostock has shewn (*Ed. Med. Sur. Jour. No.* 17.) in the instance of corrosive sublimate, that an animal may be suddenly killed by receiving a metallic poison into the stomach, and yet that the most delicate tests may be inadequate to detect its existence.

5th, What degree of information can be derived from administering the contents of the stomach, of a person supposed to have been poisoned, to animals? Such a test must always be liable to considerable uncertainty, and much inferior in accuracy to others which may be employed with equal ease. It is to a certain extent true, that substances poisonous to man will not always occasion deleterious effects in animals. In the case of a mineral poison, it must always be preferable to draw our conclusions from the results of an examination of the suspected matters by appropriate tests.

With a view to explain and appreciate the relative importance of each of the preceding objects of inquiry, in cases of supposed

murder, we are presented with a commentary on the principal ones.

1. The patient is living, and medical assistance is required. Here we have the least complicated case, and it is only necessary to guard against the operation of various errors and prejudices. The practitioner must inquire into the previous state of the patient; his age and occupation; above all, the present symptoms; whether he has previously suffered a similar attack; whether any of his friends or family are similarly affected; the quantity and quality of the meals last taken; the remedies used; if any, by whom recommended, by whom administered; lastly, the appearance of the evacuations.

2. The patient is dead. The attendants can furnish only an imperfect account of his dissolution. Here our inquiries are to be directed to ascertain whether he had died during a paroxysm of passion, which might produce apoplexy, and accelerate the fatality of other diseases; whether he was intoxicated; how soon he is supposed to have died after the alleged cause of dissolution.

3. The person is dead, and the history of his dissolution unknown. Many important circumstances may be learned by the inspection of the body; for this reason we should note its situation and attitude; the general appearance of the countenance, as to colour, vascular turgescence, &c.; whether any discharge issues from the mouth, nose, ears, &c.; the apparent age, bulk, stature, obesity, muscularity, &c.; formation of the neck as to shortness, thickness, &c.; the probable period that has elapsed since the extinction of life; the presence or absence of punctures, contusions, or other injuries, and the proofs they afford of the employment of any particular instrument; whether the wounds were mortal, or sufficiently severe to have caused death; whether they were inflicted during life; whether they resulted from an act of suicide, from accident or design: in the case of a female, whether there be any signs that would indicate the commission of a rape. Neither should the examination of surrounding and collateral objects be neglected; as the description of the place where the body is found; whether there be indications of a struggle, or traces of footsteps; the neighbourhood of weapons, and their relative position; if the body be found in the water, whether it was killed by drowning, or by other means; if found hanging, whether suspended during life, or after death; whether an act of suicide or of murder; lastly, if the deceased is found in an apartment, whether that be in a house of ill fame?

The anatomical dissection, however, is the most likely to

throw light on the causes of death in particular cases, and requires the utmost care and attention in the performance. We do not think it necessary to give the directions which the authors recommend in the execution of the operation, supposing it to be a part of the profession with which most surgeons must be sufficiently acquainted. Under the head of dissection may be included the examination of wounds and other superficial injuries; and as the authors correctly remark, the discovery of what may appear sufficient to account for death in one part, ought never to prevent our proceeding with the investigation of the rest. In the case of a female, the organs of generation should always be inspected; as very important conclusions may be deduced from the discovery of an impregnated or unimpregnated uterus, from the state of the ovaria, and the absence or presence of corpora lutea.

Infanticide.—In cases of alledged infanticide, the objects to which the practitioner should direct his inquiries are to ascertain, 1st, Whether the child was born alive? 2d, Whether its death was the result of natural causes; of wilful murder; or of negligence and abandonment? Some remaining questions, as whether the negligence causing death be criminal or accidental; and as to the relation of the appearances in the supposed mother, with the fact of parturition, are either included in the above, or have already been treated of.

To ascertain whether a child was born alive, we must in the first instance inspect the body of the infant; we may thus learn whether it had arrived at such a degree of maturity as to render it capable of maintaining an independent existence. If the contrary can be proved, the charge of infanticide is at once done away with: for this reason, it would be desirable to fix a period previous to which a child should not be supposed capable of supporting extra-uterine life. The authors consider this period to be the end of the seventh month, though they allow that a diversity of opinion exists on the point. The difficulty of perfectly ascertaining the age of a fœtus is considerable, and very far from being removed, by the many ingenious modes which have been proposed for determining it. At best, the evidences supply us only with grounds for forming a probable conjecture. The principal information is to be derived from the weight, bulk, and length of the fœtus, from the progress of ossification, and from the state and conformation of certain parts, as the head, brain, liver, heart, testicles, and pupillary membrane.

The body must be examined, for the purpose of tracing wounds, bruises, and other marks of injury. Dissection must

then be performed, and the great cavities carefully examined, for the purpose of detecting the appearances of disease or injury. The examination of the lungs, it is well known, is of particular importance in such cases, and practitioners are now well acquainted with the inference to be drawn, not only from the ancient hydrostatic test, but also from that known by the name of Ploucquet's. Since the argument of Dr. W. Hunter, in his Essay on the Uncertainty of the Signs of Child Murder, the hydrostatic test has fallen into a greater degree of discredit than it seems to deserve; the exceptions have in fact been substituted for the general law. So far has this extended, that in the report of a trial, within the last two years for child-murder, the presiding judge is reported to have said that this test was now deservedly exploded, and the inferences from it no longer attended to. Many of the statements of Dr. Hunter are notoriously incorrect, such for instance, as that the lungs will swim as readily in water when the child has made one gasp, as if it had breathed longer. It is now admitted that the distention of the lungs is not so sudden, and that respiration is gradually rendered more perfect. In giving an opinion, we should of course be guided by the extent to which the lungs are found distended.—That the lungs will float, when artificially inflated, is true; but by the application of other tests, this cause of fallacy may be in a great degree removed; for instance, we should find by Ploucquet's test, that the absolute weight of the lungs was much disproportioned to that of the body; and it should be remarked, that in vindicating the hydrostatic test, we by no means recommend it as exclusive or infallible, but merely as one among other means of acquiring information, each giving and receiving mutual assistance. It is true again that the lungs may float in consequence of putrefaction; but in the first place, air evolved by putrefaction causes a different appearance from that which has been inspired; secondly, putrefaction is of very late occurrence in the lungs; and thirdly, as in the former case, putrefaction would add nothing to their absolute weight.

Of Ploucquet's test, though founded on less certain grounds than he supposed, the same remark may be made in answer to the author's objections to its adoption, that though by no means positive in its conclusions, and liable to considerable variation, yet when combined with the employment of other means tending to the same end, its indications are much increased in value. In a word, we think that with the appearances of putrefaction or the contrary, a careful dissection, combined with the employment of these two tests, cannot fail,

in most cases, to throw a considerable light on the question of the occurrence of respiration, and on the extent and duration of that function.

Our limits will not permit us to enter farther into the subject of infanticide, and compel us to bring our analysis to a conclusion. The remaining subjects treated of are of minor importance, as Criminal Responsibility, Pleas in Bar of Execution, (perhaps properly belonging to other subjects already treated of) and lastly, Punishments.

The greater part of the third volume is occupied by an appendix containing a copious collection of papers, cases, law-authorities, &c., altogether with the medical evidence given in some criminal cases alluded to in the work; among them is the evidence in the case of Sir Theodosius Boughton, and also in that of Mrs. Downing in 1817, which deserves an attentive perusal.

It is hardly necessary that we should express an opinion of this book; the extent of our analysis, far as it is from being complete, will at least convince our readers that it contains abundant information, selected in general from the best authorities. At the same time, there is much, which though interesting, is very indirectly connected with the subject of the treatise, and serves only to increase its size and price unnecessarily; but we find it difficult to be displeased at the defects of a work which altogether has afforded us much gratification. Dr. Gordon Smith's work is still, however, the best for the medical practitioner.

Dr. Pring's Principles of Pathology*.

Intermingled with many dark, and to us unintelligible, sayings on the nature of life, and the theory of disease, this work contains much practical matter of great value. It is with the latter that we purpose principally to concern ourselves, being convinced that, till we are capable of creating a living body, we shall never be able to explain satisfactorily any one of the vital functions, whether in a state of health or disease. Besides, we might fill our whole number with the author's theoretical speculations, and add little or nothing to the real knowledge of the reader. It is singular that he seems to have little acquaintance with the

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* An Exposition of the Principles of Pathology, and of the Treatment of Diseases. By Daniel Pring, M. D. 8vo. pp. 524. Underwood, London, 1823.

recent profound work of Dr. Barclay, though he dedicates this work to him.

It is one of the great faults of many of our late medical works, that they are without an index, and are generally furnished with only a meagre table of contents. The author hurts both himself and his publisher by this carelessness or indolence; for before a purchaser can guess at what is in the book, he must hunt over the whole, page by page, and after all may overlook the very subject for which he is searching. Dr. Pring is very culpable in this respect; for nobody, by glancing at the contents of his ten chapters on the Humoral Pathology, Spasm, &c., could anticipate the various topics which he takes up and discusses in his progress. As we think it a matter of some moment to all professional writers to attend to this, in justice to themselves, we shall attempt to sketch out the contents of this volume, not as a model, but as a specimen of what we mean.

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Mixed with much error, there is undoubtedly some truth in the humoral pathology; at any rate, of all the doctrines that have been propagated on medical subjects, it is the best adapted for explaining the phenomena of disease to the uneducated mass of mankind. But, now-a-days, an essay on the thickness and thinness of blood, or its vitiated qualities, has no attractions for a physician. The reveries of Boerhaave and his followers are long past. The doctrine of Spasm, also, has had its day; and we may now wonder that Cullen, notwithstanding his being dazzled by the splendour of his pathological visions, could look upon a Boerhaavian with contempt; for the doctrine of spasm undoubtedly involves more than one point of the humoral pathology.

Our author has dwelt much on the Brunonian system; but although, in the treatment of this subject, he has displayed a great deal of ingenuity, we shall pass over his abstruse reasoning, as we have no wish that the reader, like ourselves, should be "in wandering mazes lost." Although for the most part bad, the practice of the Brunonians is good in cases of extreme exhaustion, or in direct debility, where the doctrine assumes that there is an accumulation of excitability. In this state, which is induced by considerable privations or depletions, the practice of increasing very gradually the means of repletion cannot be too

much insisted upon. In the beginning of convalescence from fever, by which the system was much reduced, a single meal, of a highly nutritious quality, has been the occasion of fatal apoplexy. After severe hemorrhage, also, blood is often determined to the head with great violence, when food has been supplied suddenly, and in too great quantity; and in no state has this occurred oftener than in the puerperal, where we may find all the degrees of cerebral disorder, from pain and throbbing in the head, to delirium, epilepsy, or apoplexy. Indeed, twelve days after a delivery which has been attended with profuse flooding, a stimulating meal, given contrary to orders, has eventually produced death. In such a case, a single glass of porter, given improperly four days after delivery, has occasioned apoplexy. In any period of the puerperal state, stimulants should be very cautiously administered. In ordinary cases, after delivery, we have known spirits sweetened with sugar, and given as a medicine, very speedily induce inflammatory symptoms; and we could ascribe such treatment only to villany or ignorance. We have seen a drachm of weak currant wine double the pulse.

In violent determination of blood to the head, such as we have just mentioned, the author, instead of using the lancet, as is generally done, has had recourse to active purgatives. When the pulse has risen suddenly from 80 to 130 or 140 pulsations in a minute, with intense pain in the head, restlessness, &c., he has given six grains of calomel, and as much of James's powder, followed by a two ounce draught of salts and senna, with half a drachm of jalap in it; and whether rejected or not, this has been repeated in less than an hour, till the bowels have been freely opened. Afterwards, the tendency of blood to the head has generally been kept within bounds by small but repeated doses of Epsom salts. If this treatment should not altogether answer our expectations, Dr. Pring thinks that putting the system suddenly under the full influence of mercury would have a beneficial effect; much more so at least than the employment of the lancet: but he would do this only when the case is nearly desperate. But he has had numerous cases of the above-mentioned kind almost as bad as could be, which all ended favourably when he treated them entirely with purgative, nauseating, and perhaps emetic remedies.

Our author's observations on typhus, and on the application of the Brunonian treatment, are very deserving of attention. He has shown that the stage of typhus to which alone Brown's treatment could apply, ought never to occur under judicious management; that is, in using, at an early period, the proper

antiphlogistic remedies, particularly blood-letting. But he does not, by any means, employ blood-letting in inflammatory typhus to the extent that some persons have recommended. Of his practice in that form of the disease, we give the following case as an example. A labouring man, 45 years of age, had severe rigors, followed by fever. Our author saw him ten hours after the first attack; and a little before this he had complained of dizziness. He was delirious, his face flushed, his eyes red, his tongue was dry, his skin hot, and his pulse full and beating 136 in the minute. Twenty ounces of blood were immediately taken from his arm; then eight grains of calomel and eight grains of James's powder were given to him, and in an hour after a black draught, with half a drachm of jalap in it. His hair was cut quite short, and his head kept constantly drenched by cloths dipped in cold water. When the purgative had operated, he took a grain of emetic tartar every six hours; and in twelve hours from the first purgative, he took three grains of calomel, and six of James's powder, which were followed in six hours by a black draught, with a scruple of jalap in it. Thus the pulse in 30 hours was brought down to 106; and after that, it was not difficult to keep it within bounds by a repetition of the same means, but without any further blood-letting. In this manner the author, in twenty-four hours, has brought down a pulse from 120 to 56 in the minute, without blood-letting. If, after this, the disease does not run a safe course, he thinks it will generally be owing to an imprudent use of stimulants. The above fever continued about six weeks, but as a subdued disease. Towards its termination, biles or abscesses formed about the legs, connected with extensive erysipelatous inflammation of the neighbouring skin. This frequently happened in the fever which prevailed at Bath three years ago. In some instances, there seemed to be an intimate connexion between typhus and erysipela; the latter appearing to come in place of the former.

Our author next mentions a case of typhus gravior, which occurred in a man, after natural small-pox of the confluent kind, when the patient lay in a state of insensibility, with other symptoms of the worst description; but which ultimately did well. The man was purged every day, was allowed nothing stronger for food than broth or gruel, and towards the end of the fever was put under the influence of mercury. The atmosphere of his bed-room was fœtid and putrescent, and his breath had a very putrid smell. In our author's opinion, typhus has two origins; one from external infection, and the other from a spontaneous generation of the disease in the subject affected by it. The same treatment, by purgatives chiefly, the author

found to be equally successful in the congestive and atonic forms of typhus. In typhus fever, small doses of emetic tartar, or large ones of squills and nitre, in union with purgatives, were more effectual in diminishing the frequency of the pulse, than repeated bleedings. Our author does not approve of digitalis being given in the middle and latter stages of typhus. In the middle stages of this fever, when the tongue had become clean, he sometimes found bark of service, when conjoined with small doses of Epsom salts; but in general he found his patients recover better under a low diet and Epsom salts. During a tedious recovery, a deviation from this plan was frequently productive of trifling relapses. We think that, in many instances, these observations of our author will be found true. We agree with him, also, that when patients are bled in the commencement of the fever, it runs a more mitigated course. When an emetic has been given, before the bowels have been emptied by a purgative, he has known its operation followed by apoplexy. When, in spite of the most active treatment, the patient in this fever has become comatose, he has generally been recovered by being put rapidly under the influence of mercury, which was brought about by giving him ten grains of calomel every six hours. In short, our author unequivocally condemns the Brunonian or stimulating treatment of this disease.

The idea that the blood at times contained in some particular part of the body is greater than the usual quantity, originated with Hoffman. This is what we call *determination*, a name which seems to imply the mode of its being sent there. An improvement was made on this doctrine by Dr. Parry of Bath, who probably gave it all the perfection it is capable of; and though that gentleman's general doctrine and principles may be erroneous, they are accompanied, says our author, by much valuable observation and a very extensive experience; a remark, however, which may be applied to many practical authors whose theories are now obsolete. The great fault of Dr. Parry was extending the doctrine, which he found to be true in some instances, to every disease. All theorists do the same.

We shall not enter with our author into the dispute, whether arteries have a dependent or an independent power of forwarding their contents; we are satisfied with the fact, that the arteries of an inflamed part seem to act with greater force, and to draw blood to it in greater quantity than usual; and we care little whether the power which does this be called increased action of the vessels, of the capillary attraction, or with Dr. Pring, a vital affinity lodged in the extremities of arteries. From analogy, it would appear that in all cases this power is excited to increased action by stimulants. The pathology of deter-

mination affirms that every disease is local, or at least, that it has a local origin; that every determination of blood is simple or inflammatory; and that all diseases, functional and organic, are caused by determination of blood to their respective seats. It also states, that a determination of blood to one seat, may cease upon the occurrence of a determination to another. In such cases, that arteries are dilated, is a fact that must have been noticed by the most careless observer; but how this is brought about is not evident. The vascular system, as our author thinks, is probably passive in this business, the vessels do not dilate, but are dilated, and the immediate cause of their dilatation, in his opinion, is an augmented volume, and, in inflammation, an augmented velocity of the blood; the latter being proved by the wounds of minute vessels. And as the blood is also passive, the assistance of another power is requisite, that its volume or velocity may be locally augmented, and this power, as we have seen, our author has named vital affinity. In such cases, our author cannot allow, that the dilatation of arteries is occasioned by the loss of their contractile power, or that they have an inherent capability of dilatation.

From cases of hysteria, convulsions, tic douleureux, and tetanus, where such a thing might have been expected, our author has shewn that determination of blood is not a universal accompaniment of disease; and on this ground alone it cannot be a *universal cause* of disease; although we allow that in very many instances it may be present. But here it is not the *cause*, but the mere *effect* of disease; for the most accurate examination will not shew that the determination of blood precedes the other phenomena with which it is associated. It is, therefore, but a part of the diseased state which it helps to establish. If health depends upon a vast number of causes, a circumstance by no means incapable of proof, is it at all likely that disease, which is merely a deviation from health, shall acknowledge but one cause? But even if it were so, the author has shewn at great length, from the diversity of symptoms, and the variety of termination in inflammatory diseases, that determination cannot be that cause. A preternatural determination is the consequence of a state which is strictly local, and not common to the arterial system, as in parts of that system no determination whatever is observable; and such a state is owing to an increased function of the secerning system. The parts are preternaturally excited, their consumption, therefore, is more rapid than usual, assimilation is proportionally rapid, and the supply of blood is in like manner increased. In

diseases, therefore, the local determination of blood is commensurate with the state of excitement to which we have just imputed it; but this excitement is common to very different states of disease; and alone, therefore, it is no source of the explanation of the phenomena of the disease.

In some cases, however, there is so far from being a preternatural diminution of blood, that disease is associated with a deficient energy of the function to which its presence has been imputed; as probably happens in some kinds of suspended menstruation, and in paralysis of particular parts, where there seems to be a general shrinking or wasting of their structure. "The local increase of blood may be said to belong to irritation, inflammatory, and specific disease." We have an example of the first in that determination to the head which succeeds to exciting or depressing passions, to sudden impressions on the senses, or to the too free use of alcohol: In the second, we have the usual phenomena of inflammation, with the existence of fibrine on the surface of the crassamentum: As examples of the third, we may instance cancer, fungus hæmatodes, tumours, diseases of the skin, &c. A few hours before death, a distinct pulse may be felt in the carotid or temporal arteries, when it cannot be detected in the arteries of the wrist; and the same thing has been observed in certain diseases, which have terminated in recovery.

The danger arising from local disease may often be appreciated by the rapidity of the pulse; thus, says our author, we need have no fears about a case of synochus or typhus, in which there may be determination to the head, and perhaps delirium, if the pulse does not exceed 110, or even 120, in twelve hours after the rigour; but, we may be apprehensive of fatal consequences, if it rises so high as 140 in the minute. In other diseases, the same remark will apply, and to a great extent in chronic diseases. Yet this, though generally, is not invariably true. Persons also are sometimes found in whom the pulse is no criterion of disease; it being habitually from 110 to 140 in a minute, when at the same time they are in perfect health. Accidental circumstances will likewise cause a temporary dilatation of the arteries of a part, even greater than is ever met with in disease, and without the production of any bad effect, as there was no previous diseased state. In fatal apoplexy, the carotids are sometimes less dilated than in violent exercise; and Dr. Pring has known fatal sanguinous apoplexy, where the face was pale, both before and after death, and where the circulation was rather low than otherwise. It would appear that an accumulation of fat is a frequent, and probably a general

provision against disease from excessive repletion. Thus, in two men who are drunkards or gluttons; the one who gets fat enjoys good health, but the other who remains lean, is killed by his drunkenness or gluttony; that is, he will have fever and then local diseases, at first merely inflammatory, but sooner or later ending in disorganization. The author observes that, where there is disease with local determination of blood in some particular seat, the mere excitement of determination in another quarter, so far from curing, will perhaps aggravate the original disease, unless it be related to it, or of the same kind. If it were otherwise, nothing would be more easy than to cure diseases; as we can produce artificial determination of blood in a variety of ways. In gout we can produce inflammation or vesication in almost any part; but if they produce only their own independent effects, they are not curative. Thus, when gout has affected the head, and occasioned delirium, difficulty of articulation, &c., sinapisms applied to the feet, and blisters to the insides of the thighs and calves of the legs, when they fail to produce a metastasis of gouty disease, frequently irritate, and add to the severity of symptoms in the original seat of the disease.

If all diseases arise from a local determination of blood, their cure would be by no means difficult; blood-letting would in a very short time bring about a recovery or death; but bleeding is by no means a universal remedy. It is inflammation, where determination of blood is most evident; but even there the abstraction of blood is not a measure to be wholly depended upon; there are other remedies equally efficient. Many of these, says our author, agree with blood-letting in deriving fluids from an inflamed to an unaffected seat, but remedies are sometimes curative of inflammation which actually determine blood to its seat, and at the same time quicken the circulation. This effect is exemplified by arsenic in some forms of fever, and in some inflammatory and eruptive diseases of the skin, by sulphur; and by mercury, in diseases of the liver. In short, blood-letting is inadequate to the cure of some inflammatory diseases, and in others it absolutely produces a fatal termination. Such is our author's opinion; and we believe he is right, if he means that blood-letting is sometimes fatal in inflammatory diseases, from being carried too far. In pneumonia he has rarely found it necessary to take away more than 30 ounces of blood; and uniform success has proved to him that copious blood-letting is not so essential in that disease as has generally been imagined. He has even treated a case of pneumonia successfully without the

abstraction of a drop of blood. The patient, first of all, took a strong purgative of calomel, salts, senna, and jalap; he was then kept in a state of constant nausea, and occasionally vomited by means of squill, emetic tartar, ipecacuan, and nitre, in large doses: he was repeatedly purged; and the chest was once blistered. The symptoms, at first, were uncommonly severe, but the progress of no case was ever more favourable. In no case is the co-operation of bleeding, blistering, purgation, nauseating, or even emetic medicines, all producing their effects on the system at the same time, more strikingly beneficial than in those of bronchitis and croup. Our author observes, that there is no disease in which blood-letting is more forcibly indicated than in pneumonia, but he has commonly found two bleedings of 20 ounces each, within the first 30 hours, with perhaps a bleeding of eight ounces on the third day, and two or three smaller ones of five or six ounces in the course of the disease, do all that was to be expected from blood-letting. What will the advocates for a single bleeding, of perhaps 60 ounces in the beginning of the disease, say to this?

Dr. Pring speaks highly of the beneficial effect of mercurializing the system in cases of neglected bronchitis; and even in tubercular phthisis, he is inclined to think that in some instances mercury may do good, although he has generally found it difficult in that disease to direct its action to the salivary glands. His experience is decidedly against venesection in every form of phthisis; neither is he an advocate for *much* bleeding in rheumatism, trusting more to purgatives, as calomel, elaterium, aloes, senna, salts, &c., and to full nauseating doses of emetic tartar and ipecacuan. He also found all the symptoms rapidly decline when the mouth became affected by the calomel; and after blood-letting, he has found chronic rheumatism yield to alterative doses of calomel and sarsaparilla. In the same disease he has used colchicum; but can say nothing more in its favour than this, that it is an uncertain purgative. In this, as in all other inflammatory diseases, he objects only to the *injudicious* employment of blood-letting. In peritonitis, even, he trusts much more to purgatives than to either general or local bleedings. The first point, he says, in inflammation of the bowels is to overcome constipation; for when this is once effected the cure is in our own hand. His theory for this is to subvert the state of disease in the bowels, and perhaps to excite secretion throughout the intestinal canal. In this disease vomiting is generally present; but notwithstanding this, after premising blood-letting, the author gives purgatives repeatedly till

the bowels are fully moved ; for instance, six or eight grains of calomel, followed in an hour by a black draught, with half a drachm of jalap ; and if this be rejected, he goes on in the same way every hour or two, only varying the purgatives. He also gives frequent soap glysters. The stomach and the doctor may thus fight for some time ; but Dr. Pring assures us, that he has always been victor on these occasions. When the bowels are once fairly opened, he has never found any further occasion for blood-letting. In puerperal peritonitis he has followed the same practice ; and if he has applied blisters or leeches near the seat of pain, it was chiefly to afford a pretext for covering the abdomen with a large bread and water poultice. He speaks favourably of spirit of turpentine combined with castor oil in this disease ; and he says its beneficial effects proceed entirely from its purgative quality. In some cases of intestinal inflammation, when the above plan failed, he has given ten grains of calomel every six or eight hours, till salivation came on, which was quickly followed by copious stools ; and after that, convalescence was maintained by purgatives of the weaker sort. In children, also, constipations, which had resisted every other remedy, have given way when the mouth has become affected by calomel. Even when peritonitis is attended by diarrhœa, purgatives are not the less indicated. In phrenitis, blood-letting is indispensible, but the cure will be much forwarded by purgative and nauseating medicines. In puerperal mania, blood-letting is less decidedly beneficial than purging. In flooding after delivery, determination to the head is not unfrequent ; and here daily purgatives are of great service ; of which the author gives a singular case as an example.

Our author now enters largely into the consideration of apoplexy ; and in that disease he will not allow determination of blood to the head to be any thing more than a symptom, which blood-letting cannot cure, unless it be curative also of the disease. In apoplexy, he thinks that that remedy has been greatly over-rated ; and he has narrated many cases, to shew that if the state of disease is one which tends to apoplexy, that result will occur in perhaps about the same time, either with bleeding or without it. Our readers may compare his opinions with those of Dr. Cheyne on apoplexy and lethargy. In the apoplectic seizures of drunkards, we have reason to think with our author, that blood-letting is a very equivocal remedy. To a certain extent, however, it is indicated in apoplexy both by principle and experience. In epilepsy, our author seems to think that great depletion is often hurtful. The same remark may be made on chorea, in which, although he trusts for a cure princi-

pally to purgatives, he recommends a small bleeding, with the view of ascertaining how far the disease may be connected with inflammatory action. In nervous disorders of the head, he also disapproves of that remedy; and when it is used to relieve urgent symptoms, he thinks that cupping or leeching is the best form of it.

Determination of blood to the head, Dr. Pring has often found vicarious of diseases in other parts; and he has known it relieved by hemorrhage from the lungs, when much artificial blood-letting had been previously used to no purpose. We have then some remarks on hæmoptysis, and we observe that several of the author's notions on this subject are not dissimilar to those of Sir Alexander Crichton. They are all deserving, however, of the reader's notice. In determination of blood to the lungs, producing asthma, he has found a combination of nauseating, emetic, and purgative remedies, with blisters, or plasters with tartar emetic applied to the chest, more beneficial than blood-letting. In the same disease, also, where there is no organic disorder of the heart, he has found issues of great benefit. We regret we have not room to detail our author's valuable observations on diseases of the heart. We may remark, however, that he has found purgatives have often almost a magical effect in relieving patients from the pressure of fluid on the heart, lungs, and diaphragm; and of this he has given a remarkable instance; but the practice is by no means new. With some remarks on idiopathic and symptomatic dropsy, and evidence of the striking benefit of purgatives and mercurial action in both forms of the disease, the author concludes his chapter on determination. To produce, in all cases of determination, *the curative relation* of remedies with the state of the disease, is his grand object; without which apoplexy will occur, after the system has been deprived of, perhaps, more than a hundred ounces of blood; whereas, in metastases, which may have the necessary *relation*, a few ounces of blood derived from the original seat of disease, will have the wished-for curative effect. In short, while such a state of disease continues unsubverted, it is our author's opinion, that it will derive to its seat a relative preternatural quantity of blood, under the most extreme depletion, as long as any blood can be obtained.

Our author, in considering the theory which originates all diseases in the abdominal viscera, is decidedly of opinion that it is an erroneous one; and contends, that the diseases of these viscera are themselves much oftener symptomatic than idiopathic; and the stomach in particular, he imagines, suffers more now-a-days, than in former times, from the action of the brain

being necessarily much more arduous and incessant. Dr. Pring also thinks, that if there were not some peculiar habits or idiosyncrasies, affecting perhaps other seats, it would be a matter of very little moment what articles of food, or in what quantity, we should take into our stomachs. This theory, however, can do little harm, as the practice which it inculcates is generally the best that can be employed in relief of the symptoms which gave rise to the theory. We recommend to the reader's notice the remarks on the relations which abdominal symptoms have with diseases in other seats, and in the mode in which they reciprocally influence each other. The author's observations on dyspepsia are also valuable. In this disease little benefit is obtained from the blue pill during its use, but after it has been discontinued for some time, the stomach is generally found to have gained strength. When there is much nervous irritability, mercury is for the most part prejudicial in dyspepsia; and in the same state violent purgatives are also hurtful; but by no means so where the dyspepsia is accompanied with disordered functions of the liver, or chronic pain in the side or stomach. Dyspepsia has also been much relieved by issues, and particularly when the habit is scrofulous, and the patient disposed to diseases of the skin. Most diseases of the skin, Dr. Pring thinks may be cured; and the cure is brought on by remedies which substitute an artificial for a natural diseased action, or by such an act on relaxed seats, and which may be regarded as means of revulsion. He thinks that the bowels act more regularly under a full and indiscriminate diet, than under a spare and select one; and that a milder purgative, taken during dinner, will have a greater effect in regulating the bowels than when it is taken at any other time. He seems to discountenance the idea of going to stool regularly at a set hour; and thinks it a matter of indifference whether we eat of one dish or many.

From the author's chapter on the origin of disease in the NERVES, we see nothing worthy of being extracted. It is an opinion very generally prevalent, that most diseases have such an origin; and so thought our author once, but now, it seems, he is a determined *anti-nervist.*

We now enter on the chapter entitled RELATIONS OF DISEASES. Diseases, says Dr. Pring, are said to be related, when a disease in one seat produces or modifies a disease in another. For example, if a person accustomed to hemorrhoidal discharges should have a suspension of them at the wonted periods, and then suffer vertigo, pain of the head, &c., we have reason to infer that a relation of cause and effect subsisted between the

cessation of hemorrhage from the rectum and the symptoms of vertigo; and this relation would be more perfectly confirmed, if, upon the return of hemorrhoidal discharge, the symptoms of vertigo, &c. ceased. The same relations may be observed between a cutaneous eruption and an internal disease; and we do not allow the relation to subsist unless we have repeated experience to justify our inference. If disorder of the stomach or lungs be observed repeatedly to follow the disappearance of a cutaneous eruption, and to cease on its return, we should infer the relation of cause and effect; but if a steatomatous tumour, or a urinary calculus, should be formed on the cessation of a slight attack of erysipelas, we should not be justified in coming to a similar conclusion; as in the latter instance the secondary diseases bore no resemblance to those which we know by experience to be produced by this cause. But no where is the difficulty of discriminating causes more strikingly exhibited than in cases of related disease; although, from the most remote times, such diseases have been noticed both by physicians themselves and by the vulgar. Such relation is also what Dr. Parry has called the cure of disease by conversion. In many instances there is a propriety in not resisting secondary diseases, or of irritating them in others, when they are likely to be curative; for, as is well known, there are lethal as well as curative metastases or conversions. In the same class of disease may be included also what is commonly called *sympathy;* such as pain in the shoulder from diseased liver, vomiting from calculus in the ureter, &c. We regret that we cannot enter more at large upon this subject, and must therefore refer the reader to the work itself, or to another of the author's works, *Indications which relate to the laws of Organic Life.*

On the GENERAL PRINCIPLES OF PATHOLOGY Dr. Pring observes, that the common sense of the profession has been generally against the adoption of any one system. We should content ourselves with classing facts, arranging phenomena, and deducing laws from them, and should relinquish the vain ambition of specifying efficient causes. Were we to go farther with the author on this subject, we should only walk over ground which we have already crossed, or bewilder our readers with metaphysical speculations on life and organization, and their mutual connections.

Speaking next of the speculative doctrines of therapeutics, our author very justly observes, that whatever doctrine of disease may have prevailed, the same remedies have very generally been employed; and it is by experience that the career of medicine, to a great extent, has been directed. Theory has been

merely busied in forcing a conformity between facts and doctrines. This is proved by a rapid glance at the theories of the most celebrated pathologists. If, indeed, as our experience proves, states of disease which resemble each other may be cured by opposite means, that principle is at least defective, which assumes that only one treatment can be appropriate or successful. In such a case, it is our part to select the safest and the best. The remainder of this chapter is little more than a summary recapitulation of the previous parts of the work, which it would be an idle waste of time to reconsider.

In the last chapter on the PRACTICAL PRINCIPLES OF THERAPEUTICS, we have not been able to detect a single observation which is not familiar even to a Tyro in the profession, he seems indeed to have become weary of his task as it drew to a close; and therefore we shall here close our very imperfect abstract of a work which possesses intrinsic merit, which abounds with many original and ingenious speculations, and which inculcates an enlightened, a bold, and perhaps, in some instances, a dangerous mode of practice. Of this, however, experience will be the best test. The author writes well; but we wish his style had been a little less diffuse; and that he had not, in almost every chapter, laid down such a lengthened line of propositions, which can serve only to weary the attention and confuse the memory of the reader.

Dr. F. Willis on Mental Derangement*.

The strong propensity, so universal among men of science, to penetrate what is impenetrable, and to make discoveries where nothing is to be discovered, has been the cause of much bewilderment and mystery; and instead of plain practical facts, we have consequently a series of vague, indistinct, and contradictory opinions, which can seldom be turned to any satisfactory account. Our author has, on the subject of the connection of mind and body, followed the legitimate example of his predecessors, without adding much to their unsatisfactory inquiries, except in making them appear more unintelligible. He does not, therefore, endeavour "to point out what con-

* A Treatise on Mental Derangement: containing the Substance of the Gulstonian Lectures for May, 1822. By Francis Willis, M.D., Fellow of the Royal College of Physicians. pp. 234, 8vo. London, 1823.

stitutes mind, for that is wholly out of our reach." The inaccuracy (to use no stronger a term) of this mode of speaking, we have tried to expose in our Review of Lawrence's Lectures. (*Quarterly Journal*, No. 14.) For there is really no more difficulty or mystery in understanding what the mind is than what the body is. We know the meaning of thinking, and remembering as well as we do of walking, and speaking, and to search farther, is to pursue a phantom which has no existence.

Our author, at the very outset, is anxious to show that mental derangement is not, as is sometimes supposed, a disease of the mind, but is distinctly and always a disease of the body; for according to Gaubius, whose opinions he quotes and approves, the mind and the body "melt one another down into one common mass; so that, whilst life remains in vigour, where the mind is, there the body is, and wherever the body is, there the mind is also; nor can there scarce a particle of us be found in which a mixture of each may not be discerned;" it therefore follows, he thinks, that instead of delirium, derangement, and insanity, being mental disorders, each of them must be in fact, and in its origin, a bodily one, and the remedies, of course, which have hitherto been directed to, and supposed to act upon, the mind, in fact, act upon the body. One of the strongest reasons, however, which we have discovered for our author's opinion, is that the opposite one is "highly detrimental to the Practice of Physic, and its ulterior happy results." But what are we to make of our author's remark in the same page, in commenting upon Shakspeare's line,

"Can'st thou minister to a mind diseased,"

when he says it alludes to the effect of conscience, which no medicine pretends to touch? This leads to the very consistent conclusion, that medicine, by acting on the body, will reach the disorders of the mind, but not those of conscience. Are we hence to infer, that conscience is something different from the mind? Or that it is a part or principle of the mind, so unconnected with the body, as not to be affected by it? Conscience, when stript of its mystery, is nothing else but memory, perusing its record of virtuous or vicious deeds, and of course stirring up the feelings attached to them. Now will Dr. Willis pretend to say that memory is not under the influence of the body as much as any other mental faculty? Does he not know, that some bodily diseases, such as fever, impair, and others improve the memory? In attempting to prove furor uterinus not to be a mental disease, and in his allusions to hunger and thirst, and particularly the morbid thirst of diabetes, we

think he is unsuccessful; for though we should certainly not refer furor uterinus wholly to the mind, which is perhaps affected symptomatically, we think it equally erroneous to refer it wholly to the body.

Mental derangement being thus shown by Dr. Willis to depend on the state of the body, he next asserts that it is seated in the nerves, a peculiar state of which our author calls *tone*, though he does not tell us what he means by the term. When we are greatly fatigued, he tells us, in either body or mind, "we cannot well fix the mind to one point, nor restrain it from wandering. May not then the incapability of connecting our ideas be fairly ascribed to a change in the health of the nerves? May not continued anxiety induce disease, and at length deprive them of that state which I have denominated *tone*, thus laying the foundation of the consequences I have described." We must confess that this seems to us to be very indistinct, if not unintelligible, and even if he had established, as he has not, in what this state called tone consists, we cannot perceive what practical advantage would result from it.

The state of derangement termed by our author the HIGH STATE, is characterized by an unrestrained behaviour, by an irritability which urges on the patient in pursuit of something real or imaginary, to the ruin of himself, and the annoyance of his friends, and ultimately leads him, if opposed in his disordered wishes, to acts of extreme violence. According to Dr. Monroe, the first symptoms show themselves in persons naturally sober, modest, and reserved, by their drinking largely, talking wildly and obscenely, sleeping little, and in a disturbed manner, employing five times the number of people necessary to execute any work, and in general hurry and agitation of manner, but without any apparent irrationality of purpose or absurdity of design. Our author adds, that a literary man in this state will probably go on interminably arranging his library; and a tradesman ordering goods to an unwanted amount from every body he meets. This usually terminates in dark suspicions of unkindness and estrangement from his relations, and in the firm belief of some assumed visionary idea. True to his creed, Dr. Willis tells us, that "to constitute derangement of mind, the aberrations must be attended with bodily indisposition;" when this is not the case, it is more like insanity, and the cure almost hopeless. On the contrary, when the bodily disease increases, delirium ensues, and the patient raves, swears, bursts out into alternate fits of rage and laughter, agitates himself in every possible way, screams loudly, and sinks exhausted into a short and disturbed slumber. If kept

in confinement, he will cunningly appear so calm, that but for the rolling and glistening of his eye, the fit might be thought to have gone over. Sometimes the delirium does not run so high, though the patient will talk from 30 to 50 hours, without intermission, and then cease from exhaustion. The bodily symptoms are great irritability and restlessness, propensity to break and destroy every thing, bloated and mottled coun tenance, the eye-lids in constant motion, and the pupil dilated and glaring; the tongue white and tremulous; lips dry, brown, and furred; salivation or great thirst; breath hot, and often offensive; great voracity in eating and drinking. Medicines are usually inert; and the strongest emetics, purgatives, blisters, &c., have often little effect.

The CAUSES of the disorder are arranged under those that primarily effect the mind, and those which originate in the body, though the ultimate effect is practically the same, namely, the induction of bodily disease. For if from hopeless love, disappointed ambition, or loss of fortune, many successive nights are spent without sleep, the strength of the body becomes as much exhausted as from the stimulus of wine, which also, when indulged in to excess, is often a cause of the malady. He illustrates this at some length, not from cases, as might have been expected, but from Shakspeare's Lear—a very striking mark of the juvenility of the author, and savouring strongly of a college exercise. Shakspeare, indeed, occurs in the work again and again; and though we can admire the poet as highly as others, we cannot admit his evidence on medical subjects, after his sleeping draught in Romeo and Juliet.

The author does not think that the proximate cause can in any case be illustrated by dissection, or by examining the turgescent state of the blood-vessels. This he admits may be a consequence of the general derangement of the constitution, but not a cause of the mental derangement. The cause is to be found in what he calls "a peculiar state of the nerves," though what that state is, he never even attempts to inform us, though he says, "it appears of much greater importance than the remote causes."

In his plans of CURE, he strongly reprobates indiscriminate blood-letting, and we would certainly agree with him, that it is much abused; but in advocating his system, he has, we conceive, gone into the opposite extreme, which is no less faulty; for we should think, that to give wine, bark, and musk, in delirium, is fraught with even more danger than blood-letting. A case, however, will perhaps best show the principles of the author's treatment: it is not from Shaks-

peare! The patient was a young lady, of irritable constitution, who was thrown into delirium, from family distress, and placed under Dr. Willis on the sixth day of the attack. She had, with little intermission, been raving for four days and nights, and so irritable withal, that it required four persons to keep her in bed. Previous to the author's seeing her, she had been leeched on the forehead and temples, cupped on the neck, blistered on the head, and purgatives given with only weak broth and barley-water for sustenance. This had stopped the raving, and she was silent, but in continual motion. Her pulse was 130; skin very hot and parched; face flushed and bloated; eyes blood-shot and staring, but seemingly with little vision; she was also unconscious of her evacuations. She clenched her teeth when they attempted to feed her, and when any thing was introduced she immediately spit it out. Had she died in this state, Dr. Willis thinks that dissection would have discovered the blood vessels of the brain turgid, water effused into its ventricles, or some other disorder, as a consequence of exhaustion. He accordingly considered her as in a state of worn out debility, and immediately ordered her two glasses of old port wine, and two hours afterwards three ounces of a decoction of bark with some of the tincture, "as the only means of saving her life." Four hours after taking the wine she had a sound but short sleep, when she had the dose of bark repeated, and slept four hours more, and on the following morning her life was comparatively safe; and though she was still inobservant of the persons about her, she took food willingly and of her own accord. She improved indeed from the moment that Dr. Willis began her treatment; and so far as this one case goes, that treatment seems to be efficient.—Dr. Willis has also recourse to moral means during the convalescent stage, though he places but small dependence upon them for a permanent cure. Above all other things, sound and refreshing sleep is the great desideratum, as it strengthens the body, and prevents the patient from dwelling and brooding over his erroneous impressions. While awake, we should endeavour to divert the patient's mind from its usual association of ideas, and draw his attention to other points.

In the remaining parts of the work we have a superabundance of quotation, and a great paucity of personal knowledge and experience, except in so far as relates to the cases introduced from Shakspeare. Dr. Willis does not seem to be aware that other dramatists and poets could have furnished him with a copious variety of instances, since the experience of his relatives, of which he boasts so much, could not help him to a few cases.

Hear his conclusion. "Had I been deprived of the information which the experience of the ancient physicians, and of my relatives, have placed before me, I should not have ventured on the present work. The principles here inculcated have been pursued and acted upon by my grandfather and uncles for a long series of years, with acknowledged advantage and success; at once, I trust, justifying the practice derived from them, and affording a sufficient reason for the publication of this Treatise, in which both the principles and the practice are so fully developed and explained." When he is on such good terms with himself, we shall not disturb his day dream as we might have done, by reminding him of Dr. Pitcairn's anecdote of the hereditary professor of divinity at Gottingen.

SIR ASTLEY COOPER'S APPENDIX.

The standard work on dislocations, which we recently reviewed, has gone rapidly through two editions, and a third is in the press; but Sir Astley has not followed the common bookselling and bookmaking mode of adding and substracting materials, so as to render the purchase of each edition necessary to complete his work. The Appendix before us is not only printed separately, but is given gratis to the purchasers of the first edition. This is liberal, noble, and as it should be; we could name several medical works to whose authors we recommend this example, but we shall say nothing till they come before us *seriatim*.

The first case is DISLOCATION OF THE FORAMEN OVALE, which is detailed by Mr. Key, of Guy's. The patient, a man aged 41, was overwhelmed by a mass of gravel, and when the gravel was removed he was found sitting, and unable to approximate his legs. The projection of the trochanter was entirely lost, and a deep hollow in its place, while a projection, like the head of the bone, appeared at the inner part of the thigh, near the pubes. The nates were in their usual form. The dislocation was reduced by the pullies and bandage recommended by Sir Astley in the body of the work *(See Quarterly Journal*, No. 17. p. 110.), with this difference, that in carrying the injured limb across the sound limb, it was passed *behind* and not before; because, from the thigh being large and fleshy, they were afraid that the head of the femur would get under the acetabulum,

and slip into the ischiatic notch. The reduction was easy, and the man could stand without support in a week.

The second case, by Mr. Tyrrel, of St. Thomas's, was a DISLOCATION ON THE PUBIS. The man was aged 55, and was struck, while making water, on the back part of the hip, by a cart wheel. The head of the bone, three hours after, was felt below Poupart's ligament; the foot and knee turned outwards, but little altered in length. The reduction was speedily accomplished; it was not found necessary to bleed him; and he walked in five or six days.

The third case, by Mr. Maurice, of Marlborough, was a DISLOCATION ON THE DORSUM OF THE ILIUM. A man, aged 35, fell down a flight of steps while carrying a sack of wheat, which fell above him. The leg was found shortened, and the foot turned inwards, the head of the bone was found lodged among the glutei muscles. Thirty ounces of blood was taken from the arm, and the reduction was accomplished in the way directed by Sir Astley.

We next come to some interesting remarks on FRACTURE OF THE NECK OF THE THIGH BONE, which our author maintains does not unite by an ossific process *(See Quarterly Journal*, No. 17, p. 115.), and now brings forward proofs of his position from anatomical museums. In St. Thomas's collection, there are seven specimens; in the College of Surgeons, one; in St. Bartholomew's, six; at Dublin, 12; in Mr. Langstaffe's, one; in Messrs. Bell and Shaw's, six; in Mr. Brooke's, two; in Dr. Monroe's, two; in Mr. Mayo's, one; in all forty-three, excluding the numerous cases which he has seen in the living subject. The strongest proof of the difference of a fracture within, and one external to the ligament, is given in a preparation of Mr. Langstaffe's, in which a fracture has happened within the ligament, and another external to it; and whilst the latter is seen firmly united, the former has undergone no ossific change. Mr. Stanley shewed the author a bone, which conveyed the idea that the neck of the femur had been broken and united; though it is singular enough, that the neck of the other thigh bone, in the same subject, exhibited appearances nearly similar, but external to the ligament. Dr. J. Johnson very shrewdly asks if this may not be merely the common change arising from the absorption of the phosphate of lime in the neck of the thigh bone in old persons? We think this more probable than the fracture of both bones and their subsequent union, so contrary to all that is hitherto known. Sir Astley has a specimen of a fracture of the neck of the bone, and of the trochanter major, in which the periosteum and affected ligament are not torn, and in which, if

the patient had lived, he thinks there is no reason why a union should not have taken place.

When the neck of the thigh bone of some persons is cut through, a line of solid bone will be seen proceeding from its shaft upwards, through the neck of the bone, having the character of a fracture united. If the edge of the acetabulum be diseased, a projecting circle of bone will be often seen surrounding the neck of the thigh bone, looking like a united fracture. Hence the effects of age and disease may be mistaken for fractures of the bone. Mr. Colles—whose paper on this subject, in the Dublin Hospital Reports, is excellent—informs Sir Astley, that in the School Museum of Dublin there are two instances of fracture external to the ligament; where the fracture has been within the ligament, Mr. Colles has never seen a bony union; but he has seen many instances of diseased bone which might have been taken for it, upon which subject he promises to write a paper. This will probably elucidate Mr. Stanley's double case.

The next case, by Mr. Toogood, of Bridgewater, is a DISLOCATION OF THE KNEE JOINT, which is rather a rare accident. The patient was a strong athletic man, aged 30, who fell from a coal waggon, got entangled with the shaft, and was dragged to some distance. Two hours after, the knee was found much swelled, and the tibia, fibula, and patella driven up in front of the thigh. The os femoris was forced into the upper part of the calf, the internal condyle being nearly through the skin. The dislocation indeed was complete; but to the agreeable surprise of the surgeon it was easily reduced by the usual means. The man now walks by his waggon with very little lameness.

A man, aged 36, fell from a chaise, and supposes he pitched on his shoulder. Nothing seems to have been done, and now, at the distance of two months, the hand is found benumbed, with great pain in the fore-arm, at the insertion of the biceps. The acromion projects with a hollow beneath it, and the head of the humerus rests against and under the coracoid process, which is with difficulty felt above. In such partial dislocations of the os humeri forwards, the pectoralis major is to be opposed by a clavicle bandage, with a broad strap over the head of the os humeri, while the elbow is brought forward to keep back the head of the os humeri.

In a case of dislocation of the same bone backwards, the head of it was found upon the dorsum of the scapula, presenting a considerable prominence behind the glenoid cavity, immediately under the spine of the bone. Reduction was easily effected.

This case is given by Mr. Perry, and dated from St. Bartholomew's. "Our large hospitals," says Sir Astley, "should be made as conducive as possible to the public advantage, by a liberal and reciprocal communication;" and we add, that we are sorry rivalship and jealousy but too often prevent this. It is quite pitiful to see the extent to which this bad spirit often carries those who are under its influence; and it is no where more notorious than in some of the rival medical schools in the metropolis, to the great injury of science, and the infusing of baneful principles into the minds of the students. We know of no remedy for this but severe exposure, though it is a task so ungracious that we must decline being more particular; and even if we were, we question whether the faulty could be brought to acknowledge or repent.

A case, by Mr. Freeman, of Spring Gardens, of lateral dislocation of the radius, is worthy of notice from its occurring but rarely. The patient, aged 25, when twelve years of age, had his bent arm struck against a tree, by a poney running away with him. The olecranon was broken, and the radius dislocated upwards and outwards, above the external condyle; when the arm is bent, the head of the radius passes the os humeri. He has still a useful motion of the arm, though neither flexion nor extension are complete.

A case of dislocation of the radius forwards, by Mr. Tyrrell, was that of a sailor, about 30 years of age, who came to St. Thomas's Hospital as an out-patient, with a dislocation of the radius forwards, which had happened between six and seven months. The head of the radius could be distinctly felt upon the fore part of the humerus, especially when the arm was bent as much as the nature of the accident would allow, and when the arm was bent as much as it could be towards the fore-arm. The position of the limb was half supine; and when the humerus was fixed, the hand could neither be rendered perfectly supine or prone. On the attempt to flex the fore-arm, a sudden check to its motion was produced by the head of the radius striking against the humerus. From constant use of the arm after the accident, considerable motion had been re-acquired, for he could, although with great difficulty, touch the lips with his hand, yet the man was anxious for an attempt being made to reduce it, which he was persuaded against, and he went to Guy's Hospital, where the same advice was given to him.

Encyclopaedia Medica,

OR

A QUARTERLY HISTORY OF IMPROVEMENTS AND DISCOVERIES BOTH AT HOME AND ABROAD,

IN

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I. ANATOMY.

1. Dr. Uttini *on the Vessels of the Umbilical Cord.*

To set the question at rest, whether the placenta and umbilical cord contain lymphatics, as well as arteries and veins, Drs. Uttini and Vegna del Ferro, minutely examined a great number of placentæ. They were injected with coloured waters, and none of it entered either from the arteries or veins. The amnion was found to be separable from the chorion as far as the insertion of the funiculus, and retrograding towards the vaulted surface of the placenta, to form another thin membrane, lining its interior surface, which appeared under the microscope, covered with long shaggy filaments, some of them semi-transparent. In a transverse section of the umbilical cord were also seen, between the umbilical artery and the vein, a round cavity, studded with transparent points, resembling the mouths of vessels, and a viscid substance oozing from them. When mercury was thrown in between the membranes, and slightly pressed with the finger, it entered the funiculus, and when this was divided, it escaped from the transparent points, as from the mouths of transparent vessels. These Dr. Uttini thinks are, therefore, lymphatics, and the shaggy filaments their commencement. These, he thinks, join at the beginning of the funiculus; and where the funiculus ceases the lymphatics enter the peritoneum, retaining their functions.—(*Magazin der Auslandischen Literatur.*)

2. Tiedemann's *Case of Double Uterus and Vagina.*

In the very excellent Museum of Heidelberg, of which we have given some account in our first series, is a singular preparation of the uterus and vagina, both of which are double, and the uterus enlarged, from having been impregnated. Dr. Tiedemann tells us, that the patient died nineteen days after delivery, and the left uterus is accordingly in the usual state, which was to be expected,

after such a circnmstance. The uterus, on the right side, is characterized by the appearances which are found in those who have never borne children. The author of the paper tells us that he has seen no less than two cases of a similar kind.—(*Saltzburger Zeitung.*)

3. Mr. Miller's *Anatomy of Comatula.*

The scapulæ of the genus Comatula resemble those of the Pentacrinus caput medusæ, but are much more angularly pointed at their superior surface, and are also tied together laterally by an integument. From each of the scapulæ in the different species proceed either two arm-like fingers, or two arms, each of the latter formed of a common and cuneiform joint, from which, on one side, the first finger, and on the other, a continuation of the arm sets off, which again, by the intervention of cuneiform joints, divides into two or more fingers, and then forms a hand like the other Crinoidea. Each joint of the arms and fingers sends off, from alternate sides, a tentaculum, formed of many articulated small joints. An integument extends over the abdominal cavity, the groove in the arms, fingers, and tentacula, and is like that in the Pentacrinus, also protected by numerous minute calcareous plates.—(Miller's *Crinoidea.*)

4. Mr. Wilson's *Comparative Anatomy of Cuculus Caroliniensis.*

This is the Cuculus Americanus of Linnæus, and the Coucou de la Caroline of Brisson. On examining the bird by dissection, the inner membrane of the gizzard, which in many other species is so hard and muscular, is in this extremely lax and soft, being capable of great distention; but what is peculiar and very remarkable, is a growth of fine down, or hair of a light fawn colour, which covers the whole surface of the gizzard. It is difficult to ascertain the particular purpose which nature intends by this singular covering, though perhaps it may serve to shield the tender parts of the membrane, from the irritating effects produced by the hairs of certain caterpillars on which it is known to feed, many of them producing effects similar to the sting of a nettle. The same down is found on the inner surface of the gizzard of the cuculus erythrophthalma, which feeds on snails, shell-fish, &c. Mr. Wilson also found pieces of broken oyster-shells in its gizzard.

(*American Ornithology.*)

5. Mr. Clayton's *Comparative Anatomy of Singing Birds.*

Mr. Clayton and Dr. Moulin discovered that in birds, contrary to what takes place in man and in quadrupeds, there is almost a direct passage from one ear to the other, so that, if the tympanum of both ears of a bird be pierced, water, when poured in, will pass from the one to the other. There is no cochlea, but a small passage, which opens into a cavity formed by two plates of bone, that constitute a double skull all round the head. The outer plate of bone is supported by many hundreds of small thread-like columns, or rather fibres. Now this cochleous passage was observed to be much larger in singing-birds than in others that did not sing; so very remarkably so, that any person who has been once shown this, may easily judge by the head what bird is a singing-bird, though he were ignorant of the bird or its habits. Might not this curious fact be useful in ascertaining whether the antediluvian birds, whose bones are found imbedded in the Paris basin and elsewhere, were birds of song, and hymned the infant world with their music. Mr. Clayton says that the only quadruped whose ear resembles that of birds, is the mole, which is well known to be quick of hearing.

(Clayton's *Letters from Virginia.*)

II. PHYSIOLOGY.

6. Professor MEYER *on the Transition of liquids from the Mother to the Fœtus.*

From experiments on pregnant rabbits, Professor Meyer concludes, 1st. That stillicidious fluids, infused into the mother, may be transferred to the fœtus, though he does not deem the point to be quite settled, more comparative experiments being wanted to establish it; 2d. That the transition takes place by the deposition of the fluid in the cavity of the amnion; 3d. That the lungs and trachea of the fœtus exhibit no traces of the injected fluid, which proves that the fœtus does not, as Scheel and others maintain, draw the liquor amnii into the lungs. M. Meyer never thought this opinion sound, and explains the appearance of amnial liquor in the trachea of a fœtus, by observing that the fœtus sometimes makes respiratory movements while enclosed in the membranes of the ovum, which may also take place with the mature fœtus in utero, if the circulation be any way interrupted. This, however, is not natural, and may prove fatal to the fœtus.—(*Hamburger Archiv. für Medicin.*)

7. Professor DOLLINGER'S *Experiments on the Pulse.*

Our readers may compare the following remarks with the theory of the late Dr. Parry, which has excited so much notice. M. Dollinger, on visiting some water-works, observed, that on grasping the lead pipes into which water was forced upwards by pumps, he could plainly perceive an impulse at each successive wave, very much resembling what is felt in the arteries. As this could not arise, as he ascertained, from the trembling of the pipes, which were well secured, nor from the vibrations of his hand, he was anxious to find whether the same effect would be perceived in an artery when laid bare. In the presence of his pupils, accordingly, he laid bare the carotid of a dog, and though no motion could be seen by the eye, the pulse was distinctly felt. He hence concluded that the arteries suffer no alternate contraction or dilatation. The pulse is therefore, he thinks, produced by the wave of blood, the impulse being communicated without the artery suffering any dilatation, in the same way as the last of a series of elastic balls is moved by an impulse communicated to the first, while the intervening ones are unmoved.—(*Magazin der gesammten Heilkunde.*)

8. MR. BROUGHTON'S *New Experiments on the Nerves.*

A series of well conducted experiments on horses and other animals, several of them performed in the presence of Messrs. Brodie, Field, Cutler, &c., have led Mr. Broughton to some very interesting conclusions respecting the functions of the nerves. 1. The fifth pair of nerves is highly sensible, and bestows sensibility to the integuments of the face and lips generally; and when divided, all sensibility ceases in the parts below the division to which this nerve distributes branches. 2. The portio dura of the seventh nerve is entirely devoid of sensibility, and conveys none to the parts supplied with its branches. It influences the muscles of the face, the cartilages of the nostrils, and the actions of the lips; for when it is divided all those parts become paralysed, though sensibility remains entire. 3. The par-vagum is entirely insensible. If strongly compressed or divided on one side, the wheezing produced indicates oppression in breathing; when on both, this increases and proves fatal. 4. These experiments, so far as they go, prove the nerves to have separate properties, and that these are in accordance with the different individual functions

belonging to those organs to which their branches are distributed. The experiments incontestibly proved the questioned point as to the sensibility of the eighth pair, and par-vagum.—(*Medical and Physical Journal.*)

9. Drs. Lawrance and Coates' *New Experiments on Absorption.*

The Americans are becoming quite indefatigable in their experimental researches. The present experimenters were assisted by a number of their professional friends, in repeating and varying the experiments of Magendie, Mayer, &c. The most novel of their investigations relates to the actual chemical combination of two substances separately thrown into the circulation. They commenced by throwing prussiate of potass into the abdomen, and green sulphate of iron into the cellular tissue, in order to try whether the well known result of their admixture, the Prussian blue, would be produced in the vessels. This, however, did not take place; and they resolved to repeat it, by throwing the sulphate, as the article of more difficult absorption, into the abdomen, where this process went on with more facility, and the prussiate into the cellular substance. On performing this, they were gratified by the striking result of a distinct and beautiful blue in the thoracic trunk and its contents, and in nearly the whole substance and surface of the lungs. The blood threw up a coagulum of a strong blue colour, and the lymph and chyle from the thoracic duct threw down a blue deposit. The animal manifested some difficulty of respiration, but walked about without any seeming pain. In another case, the blue was found in the urine, and in the lungs. In a third, the chyle of the thoracic duct was blue, but none of the other fluids nor the lungs. When the thoracic duct was tied, the urine was blueish green, but neither the serum of the arterial blood, nor the lymph below the ligature.—(*American Journal.*)

10. Blumenbach *on Irritability of the Tongue.*

The tongue is well known to be very irritable, and the following observations place this in a strong point of view. Blumenbach had the tongue of a four-year-old ox, which had been killed by opening the cervical vessels, cut out while it was warm and palpitating, and at the same time the heart, in order to compare their irritability. They were both pricked with needles, and cut into with scalpels, for the purpose of irritating them, when the tongue appeared to survive the heart by about seven minutes, retaining the oscillation of its fibres for a quarter of an hour; and so vivid were the movements that the butcher's wife compared them to those of an eel, as Ovid had done to the divided tail of a snake. M. Reimar informed our author, that a boy, in a fit of epilepsy, having bit off a segment of his tongue all to a thin slip, it was judged necessary to remove it, which was done by M. Chaupefié. On placing the piece of tongue on his hand, it palpitated strongly, and when placed on the bottom of a window, it continued its motions so vividly, that it even appeared to change place, and creep a little forward. The prick of a needle, and other stimuli, excited a similar motion. Its irritability continued for several minutes.

(*Edinb. Philosophical Journ.*)

11. *On the Sensibility of the Tongue.*

It is laid down in the elementary books of physiology, that the tongue is not endowed with the quality of touch. Dr. Haslam, in his ingenious work on Sound Mind, says, the imperfect feeling of the tongue as an organ of touch, may be easily proved by the experiment of applying the tongue to the wrist, to discover the state of the pulse. But its imperfection in this case evidently arises from its flexibility and deficient strength of pressure, and not from its want of feeling. Those who maintain this doctrine, surely forget that the tongue can readily

detect the finest hair which may get by accident into the mouth, even when it is among a mass of food. Mitchell, the deaf and blind boy, found that his tongue was a most useful instrument of touch, and often employed it in his examination of substances. Use, in his case, must have improved its sensation; but we much question whether it would have created it.

12. MR. C. BELL *on the Motions of the Eye.*

In a paper lately communicated to the Royal Society, Mr. Bell undertakes to shew that there are certain motions of the eye which have hitherto been overlooked and undescribed. Thus, every time the eyelids are brought together to cover the globe the eye turns upwards, without which motion it would not be properly moistened, nor the particles of dust removed from its surface. During sleep the ball, he says, is turned upwards, so as to lodge under the superior palpebra. These movements are rapid and involuntary, while others are under the government of the will, and for the purpose of directing the eye to different objects. Hitherto both the oblique and the straight muscles have been regarded as voluntary; but Mr. Bell maintains that the oblique are for the performance of the insensible motions, and the recti for those under the command of volition. We therefore judge of distance and relative position by the consciousness which we have of the action of the recti; and as the functions of these muscles are inseparably connected with the retina, they cease to act when it becomes insensible, while the oblique muscles come into play, and draw the pupil upwards beneath the upper eyelid. Hence that turning of the eye-ball which we witness in sleep, in fainting, or in death, is but the indication of insensibility.—(*Medical and Physical Journal.*)

13. M. PIEDAGNEL *on the Developement of Hearing.*

There exists at birth a very considerable difference between the ear of man and that of some animals. In the human fœtus, the interior of the cavity of the tympanum is lined by a soft mucous membrane, and filled with a liquid which becomes less abundant the nearer the birth. The auditory canal is perfectly formed, small it is true, but susceptible of transmitting sounds; its interior, during the first days of life, is lubricated by a white thick matter, which, with the thickening of the tympanum, is unfavourable to the propagation of sound, but there is no mechanical cause to obstruct hearing.

In dogs, at birth, the cavity of the tympanum is quite filled by a liquid, whitish, gelatinous, and consistent. The membrane, which lines the interior of the external auditory canal, is thick and soft, and folded longitudinally upon itself, in the second and third portion of the canal, reckoning from within outwards, in such a manner that no real cavity exists, while a white ceruminous and very thick matter completes the obliteration. The external opening of the canal is completely closed up by the skin from the auricular surface of the concha. In cats and rabbits, there is no albuminous liquid on the external surface of the tympanum; but otherwise the organization is similar to that of dogs. These obstructions gradually disappear after birth, in from six to fifteen days. The opening of the eyes is similar, being in man simple aglutination; in animals, a real union of the conjunctiva. The opening of the eyes in dogs occurs two or three days before that of the auditory canal.—(MAGENDIE, *Journ. de Physiologie.*)

14. MR. BROUGHTON *on the Whiskers in Phocæ and Feline Animals.*

It appears that the long bristly hairs which are so conspicuous in the genus Felis, and also in Phoca, &c. are intended to guide the animals in the dark. By macerating the head of a cat and dissecting it under water, Mr. Broughton traced large fasciculi of nerves from the second branch of the fifth pair, traversing the lips, and sending off twigs as thick as a strong thread to the bulb of each hair of the

whiskers. No pain appeared to be felt on cutting the whiskers, hence it is probable that the nerves do not go farther than the roots of the bristles. Mr. Broughton, in order to prove their use, blindfolded a kitten, and placed it in a room which had been laid out by means of books like the streets of a town. The kitten moved on cautiously till the tips of its whiskers touched a book, when it instantly drew back. At length it found its way freely out. He then cut off its whiskers to see how it would do without them, but it could not now go on without striking its head against the books at every corner and turning. The bat has been supposed by Cuvier and Macartney to avoid walls and houses by the great sensibility of its wings; but Mr. Broughton thinks that in this respect its whiskers are of more use. It would be well to prove this by experiment, were it not so cruel to repeat those of Spallanzani.—(*Medical and Physical Journal.*)

III. PATHOLOGY.

15. Dr. Von Autenrieth *on Syphilitic Inflammation.*

Cases often occur in which inflammation appears of an obstinate, tedious, and erysipelatous character, without symptoms of a syphilitic origin, though it may be readily confounded with syphilitic inflammation, particularly where the central ulcer is not sufficiently formed, or too deep in the throat to be discovered. In these cases Dr. Von Autenrieth never met with the following symptom, which, on the contrary, he never found wanting in any case where a common syphilitic ulcer, either large or small, superficial or deep-seated, existed in the throat. This characteristic symptom is a colourless watery froth, consisting of little vesicles found in large or small quantities at the hind part of the root of the tongue. Wherever he found this froth, he was sure to meet with a syphilitic ulcer if fever so hidden. A very close examination at the moment, when, on the root being pressed down, the patient involuntarily attempts to swallow, easily discovers whether the froth be present. By attending to this, the author was never deceived in his diagnosis.—(*Mag. Auslandischen Literature.*)

16. M. Guyon's *Experiments on the Contagion of Yellow Fever.*

The following experiments, performed last summer at Fort Royal, Martinique, are strong in support of the non-contagion of yellow fever. We must, of course, make allowance for idiosyncrasy, and something perhaps for the relation being very French-like. M. Guyon first took the shirt of a soldier who had the yellow fever, which was drenched with the perspirable matter of the patient, and having put it on instantly, continued to wear it for twenty-four hours. He was at the same time inoculated in both arms with the yellow matter from suppurated blisters. M. Guyon did not take the fever. He next took from a patient, who had died of yellow fever on the fifth day, his shirt, quite soaked with black sweat, and still warm, and went immediately into the bed of the deceased, still soiled with excrement, &c.; here he remained six hours and a half, having both slept and sweated. M. Guyon did not take the fever. The soldier, whose shirt he had first put on, died, and his body being opened there was found a black sanguineous matter in the stomach, with which our experimenter had his arms inoculated, while the punctures were covered with portions of the deceased's stomach. This, in twenty-four hours, inflamed the parts, and affected the axillary glands, but still no fever. To crown the grand enterprise, M. Guyon drank about two ounces of the black vomit, while his arms were again inoculated, and rubbed with the matter, by M. Cuppé, surgeon of the marines. M. Guyon again escaped the fever. His ex-

periments are said to have been performed before many witnesses; and the authenticity of the account is testified by M. Donzelot, Governor and Lieut.-General.—(*Revue Medicale.*)

17. BLUMENBACH *on the Zanthoöpia in Jaundice.*

Every medical man of the least observation knows, that the common notion of patients in jaundice seeing every thing yellow is not true; for though it may occur, it is certainly so rare that few have witnessed it. Blumenbach thinks that this rarer zanthoöpia seems to be in this condition, that it supposes at first a yellowish tinge in the pellucid media, which transmit the rays of light, especially of the aqueous humour and crystalline lens; then a not so gentle but more sudden attack or increase of the disease; and lastly, both a vivid perception in the sensorium and application of the mind. But as these seldom happen at once in jaundice, few patients complain of the yellow tint of objects. Blumenbach once knew a lady, who, on a sudden and severe attack of icterus, saw white objects livid and dusky; clear linen, for example, appeared as ill-washed. Those again, who take the disease gradually and slowly, no more experience this yellow vision than old people, in whom the lens sometimes becomes yellowish or livid.—(*Brewster's Philosophical Journal.*)

18. DR. TRAILL *on Oil in the Human Blood.*

Some blood taken from a young man in acute hepatites, under the care of Dr. M'Cartney, having exhibited a white serum, was sent to Dr. Traill for examination. Its specific gravity was 1.0187, and on analysis, it was found to contain,

Water,.....	78.9
Albumen,.....	15.7
Oil,.....	4.5
Salts,..	0.9
	100.0

The oil existed in the form of an emulsion. It is worthy of remark, that these peculiarities appear to be connected with inflammatory disease, and in two other cases were decidedly accompanied by acute hepatitis. In one of these latter cases Dr. Trail found no peculiarity in the blood during health, so that in this case it could not arise from idiosyncrasy.—(*Edinb. Surg. Journal.*)

19. DR. S. C. LUCAE *on Cretaceous Depositions in the Heart and Arteries.*

In six patients, all in the prime of life, and who had been exposed to hard labour and inclement weather, Dr. Lucæ observed symptoms characterising rheumatism of the heart, which ended in apoplexy and death. On dissection, he found concretions of a white, friable, and chalky nature, not unlike the sediment in the urine of gouty patients, disposed in large or small portions, between the valves of the heart and the large arteries, frequently in so great quantity as to intersect the fibrous texture, and interrupt its motions. The heart was also found enlarged, and water in the pleura and pericardium.—(*Saltzburger Zeitung.*)

20. M. OLLIVIER'S *Proofs that the Yellow Fever of Spain is different from that of the West Indies.*

We are informed, by a great number of physicians who have practised in the West Indies, that the *yellow fever* in that part of the world is endemic, and not contagious, and that it is possible to escape its influence by retiring into the interior of the country, and leaving the low, damp, and marshy sea-coast, where

it is produced; that it never spreads in those elevated and healthy districts, even although persons ill of the fever should be brought there; that the natives, and those who have become accustomed to the climate, are rarely influenced by these local causes; that those persons who inhabit the mountains run nearly as much risk from the disease as Europeans, when they visit the low grounds; but that Europeans are in a more particular manner the victims of the disease.

We can hardly withhold our assent from these conclusions, which are supported by such strong testimony, and so many circumstantial facts; but it would be very dangerous to apply the doctrine of endemic and non-contagious causes to our continent, and more particularly to the Spanish peninsula. It is proved by the following facts, that the yellow fever of Spain has a very different character, which is, perhaps, occasioned by the climate of Europe. These facts I collected on the spot.

1. Its mortality is greatest amongst the natives.

2. It is not confined to the sea-coast, but spreads far into the interior of the country, and even into the driest, most elevated, and healthiest districts; for instance, to Carmona, which is from 20 to 25 leagues distant from the sea.

3. It is found in the interior of the country, when the sea-port towns are free from it: as in Murcia, in 1812.

4. It was not produced in Spain, as we are assured it has been in the West Indies, by the effluvia of marshes, which had been rendered active, by exceedingly warm weather. The towns in the bay of Cadiz, where for the most part it first shows itself, are in general salubrious; at Chiclana, in particular, the rich inhabitants of Cadiz have their country-seats and pleasure-grounds.

5. It is believed by all the inhabitants of the country, that the disease is imported from America, and that it has been propagated by contagion over a great part of Andalusia. It must have been in consequence of numerous proofs of contagion, that lazarettos have been established, even in the cities of the interior.

6. The places where the disease is prevalent are not fatal to strangers; for not a single Frenchman stationed in 1810, 1811, and 1812, in the situations where it usually appeared, was affected by the disease, which, besides, had not previously appeared for several years; nor did it show itself for several years after. Is so long an interval of its non-appearance consistent with its production from local causes inherent in the climate? If these had not been imaginary causes, they would surely have affected in a very violent manner those Frenchmen not habituated to the climate, who in the greatest heats of 1811, (the year of the Comet) were encamped on the sea-coast, on very low grounds, where a great number of mud-forts were built, which surrounded the whole bay. The hulks, so unhealthy, and so crowded with French prisoners which had been stationed for several years in Cadiz bay, have never produced a single instance of yellow fever, although scurvy and dysentery have raged with the greatest violence on board of them.

7. It prevailed, in 1811 and 1812, but not in a very malignant form, in the kingdom of Murcia; and its being concentrated there was doubtless occasioned by the line of military posts which had been established to prevent its importations into the west of Andalusia, and by the difficulty of communication in time of war.

8. In the general retreat which took place in 1812, the army of Andalusia passed through the kingdom of Murcia, in the internal parts of which were some infected towns; but the bulk of the army escaped from the contagion, in consequence of strict orders having been given that no person whatever should enter them. However, the division of General Conroux was attacked by it, on account of one of the soldiers having had communication with a woman, infected with the yellow fever; but the rest of the army was preserved from the contagion, as Conroux's division was kept in the rear, in a state of complete insulation.

The following account of that circumstance, as it was put into the orders of

the day, I received from M. Cohen. " The orderly dragoon of General Conroux enters a small town, when the yellow fever is prevalent, he has connection with an infected woman, and is seized with the complaint. The general's aide-de-camp, and a few other men, are infected by him. The division soon arrives at Hiecla, a small town of Murcia, where there had been no epidemic malady, either amongst the inhabitants, or in the French battalion which had just left it. The infected patients of the division are placed in an hospital, and in a short time the aide-de-camp and ten men die, after having had the black vomiting."

From these facts, I think I may conclude that the yellow fever, which at that time reigned in Spain, was not produced by endemic causes. That it is independent of the high temperature of that climate; that it is equally prevalent among mountains as on the sea-coast, which is generally thought to be its seat; that it does not depend on climate, as natives and strangers are both equally liable to its attack; and that, as its progress has been arrested by insulation; and, on the contrary, as it has been produced, when that precaution was neglected, we have a proof of its contagious nature. Indeed, in consequence of the facts observed in 1800, and the following years, it is the general opinion of the medical practitioners of Andalusia, that the disease is contagious.—(*Decadas Medico Quirurgicas.*)

21. M. ANDRAL, Junior, *on the Pathology of the Digestive Canal.*

This assiduous enquirer has here presented us with a very elaborate paper, in which almost every inch of the digestive passages, from the mouth to the anus, is minutely examined both in health and disease. We cannot praise too highly the plan of such monographs, though we ought to be on our guard in perusing them, as the spirit of system and of endless subdivisions, almost in all cases of this kind, stirs up the fancy and warps the judgment of the monographist. The French naturalists have, in this spirit, given many descriptions of plants and animals, which never existed; and we fear that the same folly has more than once been committed by medical men, in describing diseases and appearances which they had never seen, in order to fill up some gap in their systems and their monographs. With these remarks in our mind, we shall give a brief abstract of M. Andral's paper, and leave our readers to verify or reject his descriptions.

INFLAMMATIONS of the digestive canal are usually characterised by intestinal contraction, though such contraction may occur in the pyloric portion of the stomach, the cæcum, &c., where no inflammatory symptoms can be observed. The sub-peritoneal and cellular tissues also appear injected when viewed externally, but the injected state of the mucous tissue cannot be thus discovered; and in all dissections this should be attended to, as the seat of disease may otherwise escape observation. The internal surface of an inflamed intestine may be of all shades of colour, from bright *vermilion* to deep *brown*, indicating in the latter case the beginning of disorganization, and these coloured parts may be either uniformly diffused, or in patches or points, regular, irregular, or arborescent. Pimples, pustules, fungous excrescences, irruptions like small pox, &c., are also sometimes met with, particularly in fever subjects. In order, therefore, to find the true state of the tissues, they must be carefully separated. In the healthy state, while the animal is alive, the mucous membrane is transparent, white, or of pale roseate hue, which becomes brighter red, during the process of digestion, or when fæces accumulate in the colon and cæcum. In thickness it varies, decreasing from the stomach to the rectum, where it is only like thin cuticle. Its consistence and adhesion is in direct ratio to the thickness. In inflammation it loses its transparency, increases in thickness, and where it is in patches, which are from the size of a crown to that of a shilling, these rise above the adjacent healthy surface, and are glossy and rugous. Some of these, instead of being red, are whiter than natural, supposed a consequence of an old inflammation terminated by induration. Sometimes

the mucous coat becomes soft and even liquid, an occurrence which rapidly takes place, as Mr. Brodie found on exhibiting corrosive sublimate. The white patches just mentioned are sometimes found in this state, and it is also met with in the large intestines in chronic diarrhœa. The same tissue also sometimes presents reddish or brownish vegetations, somewhat like the papillæ of the tongue, concave, divided, and moveable. They occurred to Orfila, in the stomach of a man who had taken powdered cantharides.

The SECRETIONS of the intestines, though much altered by disease, cannot be examined with much accuracy, in consequence of their mixture with the bile, the food, &c. Sometimes the mucus, instead of being viscid, consistent, and ropy, becomes like thin serum; at other times, as in dysentery, it concretes and forms false membranes, which, however, M. Andral has never seen organized. Blood is often found mixed with the mucus, probably from extravasation. This secretion is sometimes greatly increased. Morgagni gives a case in which a woman passed, per anum, forty pounds of clear lymph in one day.

The inflammations and other morbid conditions of the mucous coat are but seldom extended to the cellular and muscular tissues, though the former is sometimes inflamed or scirrhous, and the latter softened, or thickened, or hardened. The most common effect, however, is contraction of the muscular coat from propagated irritation, which, in one case related by M. Tartra, of a person who had taken nitric acid, had reduced the intestines to the size of a goose quill, and the whole of them could be held in the hollow of the hand. This contraction is held to be the chief cause of invagination and intus-susceptions, which indeed M. Peyer produced artificially by irritating the intestines of frogs. M. Andral says, however, that this is seldom if ever produced by inflammation; it may often arise, as experiment demonstrates, at the time of death. These intus-susceptions are most common in the ileum, while they are rare in the duodenum, the colon, and the rectum. Sometimes they are numerous in the same subject; the upper portion is usually sheathed in the lower, from some inches to two feet.

ULCERATIONS are rare in the stomach, still more so in the duodenum and jejunum, but frequently in the lower portions of the canal, except the rectum, in which intestinal ulceration occurred. In fifty-three dissections, nine were in the stomach; one in the duodenum; nine in the jejunum; twenty-six in the lower portion of the ileum; ten in the cæcum; eighteen in the colon; and one in the rectum. M. Andral gives a very minute description of the appearances and extent of intestinal ulcers; but it appears to us that like a great part of his paper, it is much more curious than useful, as we rarely find him saying a word about the previous symptoms.

PERFORATION is the most troublesome result of ulceration, and may extend to the exterior, to another organ, or to the peritoneal cavity. The first is exemplified in artificial anus, stercoral fistulæ, and in adhesions between the perforated intestines and the abdominal parietes; the second, in cases where communications have been formed between the intestines and the bladder, &c.; and the third, in effusions of intestinal secretions into the serous membrane of the peritoneum. The latter often proves rapidly mortal in individuals in apparent good health, of which M. Andral gives a case in which a perforation was found of two lines diameter, a foot above the ileo-coecal valve. In some rarer cases of perforation, effusion does not take place, but it may be possible that the perforation was made by the anatomist.

The TERMINATION of the inflammatory process may either be in suppuration, gangrene, or induration. The suppuration is usually established at the free surface, but may form as a sub-mucous abscess, as in the tonsils. M. Andral has never seen an abscess of the stomach. He thinks gangrene of the intestines more rare than is commonly imagined, and those described in books are by no means precise. Eschars are often found in typhoid subjects, like those of the skin, or like those from blisters.

There appear then to be three STAGES of intestinal inflammation, as in Laennec's

account of pneumonia. The first an injection of the mucous coat; the second, an alteration of its texture; and the third, disorganization and ulceration. The two last cannot be mistaken, though the first may be confounded with mere engorgement of the vessels or stasis of the blood—the remora and error loci of the humoral pathology. This depends on the state of the liver, the vena portæ, the heart, and the lungs at death; but after all possible discrimination, inflammation can seldom be distinguished from mechanical injection; and of course many of M. Andral's observations must appear at least doubtful.

In treating of ADVENTITIOUS TISSUES, M. Andral distinguishes tubercles, and the scirrhous, erectile, melanose, and adipose tissues, besides serous cysts, and intestinal œdema; but we find very little in his remarks that is practical, though it might interest the curious to have minute and elaborate descriptions of all the varying forms of tumours, &c. in the intestinal canal. Bichat denied the existence of œdema of this kind; but M. Andral has witnessed it repeatedly.

The most important, because the most practical part of M. Andral's paper relates to the diagnosis and treatment of DIARRHŒA and DYSENTERY. These have long been considered as arising from intestinal inflammation. In some cases, however, M. Andral found the whole canal very pale, particularly in old cachectic subjects, whose stools had been watery and copious. Morgagni gives similar cases where the intestine was thinned by atrophy, till it became, as Bonet says, as thin as a cobweb, and the patients died of debility, without a trace of inflammation. In these cases strengthening and astringent treatment is the only rational practice. At other times, tubercles under the mucous coat produce diarrhœa by irritation, in the same way as they excite expectoration and cough in the bronchiæ; but the diarrhœa in this case does not become permanent till ulceration ensue. There is no doubt, however, that inflammation often exists either as a cause, consequence, or accompaniment of diarrhœa and dysentery. Numerous cases have proved that acute or chronic diarrhœa results from inflammation of the small intestine, without the large participating, contrary to M. Broussais, who says enteritis is always accompanied with diarrhœa, except where colitis is present. In dysentery, the tenesmus indicates inflammation of the rectum.

Can these different states of the intestines be distinguished during life? In many cases it is possible, as in abdominal pain, burning skin, frequent pulse, and membraniform or bloody dejections. In ulceration, however, every sort of pain is often absent; while violent pain again may exist in the abdomen without inflammation, as in colica pictonum, and nervous colic which yield to drastic purgatives and other stimulants. Even the stools are not always to be trusted, as bloody stools may arise in atonic cases similar to scorbutic hemorrhages in the skin and synovial membranes, and the intestines may be found to be sound on dissection. M. Andral thinks that even ulceration ought not to forbid tonics and astringents, as these will often succeed in some cases, while in others of similar symptoms they will fail; in the same way as some ulcers will bear stimulants, while others apparently the same in character will be aggravated by their use.—(*Archives de Med.*)

M. Andral therefore, after all his parade of dissection, leaves the subject very much in the state in which he found it, though he has contrived to write a long and rather a taking paper. Dissection is very good in its place, but it is in our opinion, though we know it is for the moment an unfashionable one, very inferior to the judicious observation of symptoms; and we cannot too strongly warn our younger readers not to be seduced from more useful studies by its specious delusions.

22. M. GARDANNE'S *Case of Syphilis communicated by the Lips.*

A pupil of the College of Amiens, who had drank from a vase in the promenade, perceived some days after a slight ulcer on his lip, and soon after the tonsils and the velum were affected. He was treated "par les moyens adoucissans"; which only exasperated the disease, and in eight months after when he came to Paris, he had all the dreadful marks of syphilis—the nose being flattened and perforated, the

velum and tonsils totally destroyed, the arch of the palate exostosed, &c. An obturator of a particular form was fitted to the lacunæ, and he was put under a complete course of mercury. After the most minute scrutiny, no other source of infection could be ascertained.—(*Report of the Acad. Royale de Paris.*)

23. M. Eusebe de Salle *on Physiognomical Pathology.*

To obviate the difficulty of diagnosis in the diseases of children, M. de Salle proposes to have recourse to physiognomy. This is no novelty however, though some of his details are both new and problematical. For example, he tells us that the line which runs from the alæ nasi to the angle of the mouth, when pronounced in an unusual manner, is a certain sign of intestinal inflammation. We do not think that much benefit will result from M. de Salle's investigations, unless they take some more distinct form than the present.—(*Report of the Acad. Royale de Paris.*)

24. M. Etmuller, *of Delitzoh—Case of Psoas Phthisis.*

J. G. aged 59, a tanner, short, corpulent, and healthy, was suddenly seized with all the symptoms of enteritis, which was treated with the usual remedies without benefit. A consultation being held, it was determined to be cystitis, but little change was made in the treatment. He appeared dying, but was unexpectedly relieved by a copious fœtid stool, which left him very weak. Much greasy fœtid urine was also discharged. He was supported by salts, iceland moss, bark, &c. The lumbar region was sore on pressure, particularly when the bladder was full; and it was evident suppuration had ensued either in the kidney or the psoas muscle. He died in a state of great emaciation. On *dissection*, no morbid appearance could be discovered except the total destruction of the psoas muscle by suppuration, the abscess having broken, and been discharged by stool and by urine. It is singular that he never complained of pain in that side. Twenty years before, he had received a bruise there, by being thrown from a coach against the trunk of a tree.—(*Zeitschrift für physchiche Aertzte.*)

IV. MORBID DISSECTIONS.

25. M. Bezard's *Case of Dropsy.*

A woman aged 28, fell into dropsy after being brutally kicked by her husband. In 13 years she was relieved 28 times by purgatives, and 665 times by tapping, giving, on a moderate calculation, about 1228 gallonsof fluid. On *dissection*, the peritoneum was found cartilaginous and three lines thick; the omentum, mesentery, liver, spleen, pancreas, kidneys, and the bladder, were converted into one scirrhous mass, placed toward the right side, and containing pus. All the food and drink which she took did not balance the weight of the fluid removed at each tapping. During the progress of the disease she had once typhus, twice pneumonia, and once dysentery, without interrupting the dropsy. This is one case among many to which Mr. John Hunter's well known doctrine of two diseases will not apply.—(*Göttinger Anzeigen für Medizin.*)

26. M. Otto's *Case of Self-Castration.*

The following case is interesting, in so far as it shews that the semen may be retained a long while in the vesiculæ seminales, without being either evacuated or absorbed. A middle aged man, in a fit of melancholy, having castrated himself with a razor, was cured, but died nine months after from another affection. On

dissection the scrotum and both testicles were found to be cut away close to the pelvis, and a part of the preputium to be deficient. What was left of the vasa differentia, which were still hollow, showed little alteration; and the left seminal vesicle was small and almost empty, but the right one was of the natural size, and quite full of healthy semen.—(*Hamburger Archiv für Medizinische Erfahrung.*)

27. M. JULES CLOQUET'S *Case of Spinal Rheumatism.*

M. Cloquet presented to the Royal Academy of Medicine the vertebral column of a man, aged 50, who had been subject to rheumatic pains in the course of the spine. All the vertebræ were found to be anchylosed not by ossification of the fibro-cartilages, but by a lengthened osseous encrustation of the periosteum which passed successively over the bodies of all the bones. It is very remarkable that this anchylosis was confined wholly to the right side and never crossed the median line, so that the left side was quite healthy, a circumstance which M. Cloquet had seen in other cases. In what way does the median line act as a barrier to the spreading of disease?—(*Report of the Academie Royale.*)

28. M. SERRES' *Case of perforated Œsophagus.*

A woman, aged 22, a few days after her accouchement had peritonitis, which was subdued by leeches and tisane d'orge gommé. On reading a letter from her lover she suddenly died. On dissection, 36 hours after, a liquid of a deep brown was found in great quantity and was supposed to have escaped from the stomach, and it was discovered that the posterior parietes of the œsophagus a few lines from the cardiac orifice was completely destroyed to the extent of four finger breadths, only a few blackish and gangrenous filaments remaining. The mucous membrane of the œsophagus was affected with the gangrene two inches farther, while the fibrous membrane was healthy. The whole mucous membrane of the pharynx appeared inflamed. The fibres of the pneumo-gastric nerve were not destroyed, but were seen isolated and white. A worm of the lumbrica species, four inches in length, was found in the brown liquid.— (*Revue Medicale*)

29. M. DUPUYTREN'S *Case of a singular Tumour.*

A young woman, a patient in the Hôtel Dieu, with two tumours, one under the right axilla, and another smaller behind the right shoulder, left it for fear of an operation being performed, though this was not contemplated; but she was obliged to return, from their increasing in size, together with symptoms of a serious affection of the heart, and large vessels. She soon died, and on dissection, it was found that the tumour of the shoulder communicated with that of the axilla, which also extended by a sort of pedicle between the clavicle and the first rib, penetrating the chest, and going into the vena cava superior. The vessel was filled to a great extent by the cancerous matter of the tumours. Is it probable, (as it may be conjectured) that the disease originated in the vena cava, developing and extending itself till it formed the axillary tumour?

(*Report of the Acad. Royale of Paris.*)

30. SIR ANDREW HALLIDAY'S *Case of Melanosis.*

John Howston, aged 51, complained of pectoral pains, increased on pressure and full inspiration. Much cough and difficult expectoration; pulse 108; tongue clean; bowels constipated. He was bled, and had a purgative bolus; his abdomen became afterwards tense and hard, and hemorrhoids appeared. He grew gradually worse, in spite of Sir Andrew's active and judicious treatment, his pulse rose to 140, and he died. On *dissection*, two days after his death several black spots or tumours appeared on the skin, which when cut into were dark and medullary. Some of them were found to penetrate the skull, so as to

render it dark, but not to soften it; several of them were on the surface of the dura mater. There was no effusion in the ventricles, but under the arachnoid coat it was considerable. The brain was softer than natural. Several of the dark tumours were seen protruding on the inner surface of the thoracic integuments, and some attached to the cartilages of the ribs. All the abdominal and thoracic viscera were studded with them, the size varying from a pin's head to that of a chesnut. The tumours were also found penetrating the lungs and other viscera. Those of the liver were longest, and some of them whitish. All of them were of a medullary texture.—(*Medical Repository.*)

31. Mr. Pretty's *Case of Petechiæ Hemorrhagicæ.*

A girl, nine years of age, who had just returned from a six years residence in the West Indies, was attacked with febrile symptoms, for which a cathartic was exhibited. The fever increased with headache, blood-shot eyes, palms dark red, frequent breathing, and troublesome cough. Six ounces of blood were taken, and nitre with antimonial powder exhibited. Petechiæ began to appear over most of the body of the size of a pin's head, and one as large as a sixpence, of a blue colour, on the left leg. Some sanguineous discharge from the vagina. The treatment did not produce relief, for the petechiæ increased, with great determination to the head, and increased difficulty of breathing; for which ten or twelve ounces of blood were again abstracted with evident relief. But the fever returned, and Dr. James Johnson, the editor of the Medico-chirurgical Review, was called in, and prescribed the mineral acids. She was, however, too far gone to derive benefit from this; and she died the same evening. On *dissection*, the brain showed a little increased vascularity. In the thorax, a few adhesions, apparently not recent, were found. The lungs were loaded with blood and mucus, and though more firm than usual, they did not sink in water, and were of a healthy texture. The pericardium contained about half an ounce of fluid. The external surface of the heart was rather pale, and about twenty small petechiæ upon it, particularly at the junction of the auricles and ventricles. The stomach was distended with air, and thickly spotted with petechiæ, plainly seen through its peritoneal and muscular coats, and on opening it they appeared about the size of split peas, though some were smaller, situated in the villous coat. There were no petechiæ on the internal surface of the intestines. Several of the mesenteric glands were enlarged, and dark purple-coloured.

(*Medical and Physical Journal.*)

V. SURGERY.

32. Dr. Seiler, of Höxter's *Successful Case of Trepan.*

On the 16th Dec. 1817, as F. Bergholte, aged 16, was passing over the threshold of a house in the dark, he was precipitated into a cellar by the falling of a log of wood, and fell senseless to the ground. His head was severely wounded and the loss of blood considerable. Dr. Seiler arrived an hour after the injury and found his colleague, Dr. Rode, and some surgeons examining the wound, having already taken some blood from the arm. The patient was still senseless and speechless. On the left side of the head, at the temporal edge of the parietal bone, was a lacerated wound an inch and a half long, and the bone as well as the integuments was higher on one side than on the other. There was a degree of nausea, and at times actual vomiting. The patient occasionally seemed sensible though unable to speak.

The pulse was quick, small and oppressed. The outer edge of the depressed bone was so firmly fixed that it could not be replaced by the lever. The symptoms still continuing, a crucial incision was made and the integuments separated from the bone. It was then found that the depressed portion was in the middle of the parietal bone; that it was 3 inches long, and 2 wide; that its outer edge was firmly fixed under the temporal part of the parietal bone; and that its inner edge was an inch distant from the parietal suture. The necessity for its removal was more obvious, as it was probable that the dura mater was wounded. Two trepan crowns were therefore placed along the sagittal edge of the depressed bone in such a manner as to act in part on the detached piece, and in part on the undepressed bone, the pressure being chiefly made on the latter. The operation was effected without any injury to the dura mater or important bleeding from the bone. When the two pieces of bone, corresponding to the crown of the trepan were removed, there remained between them a space some lines across and cracked through at the point where the depressed bone lay in contact with the saggital part of the parietal. The depressed bone was now raised to its natural level; it was very moveable and its lateral attachments so slight that it was easily removed. It was discovered that its outer edge had been forced by the injury, one line under the temporal edge of the parietal bone, at which point it had torn the dura mater to the extent of an inch and a half, and penetrated the brain, portions of the latter escaping into the wound.

In spite of these injuries the improved state of the patient excited hopes, for as soon as the bone was elevated he woke as from a dream; he spoke, though imperfectly, and recognized those around him. The pulse which had been depressed, rose to 100 and became fuller. Although the injury was on the left side, the right arm was perfectly paralytic. The openings in the bone was cleared of spiculæ and filled with charpie; the soft parts were brought together with sticking-plaster, some charpie being interposed on the temporal side. The head was kept wet with Schmucker's cold lotion; nitre and neutral salts Infus. Arnicæ given internally, the antiphlogistic regimen followed, and the bowels evacuated by enemata. This treatment was pursued during the 17th and 18th, the patient being tolerably well, with little fever. He complained of slight pain in the head and occasional nausea, but was much relieved by the frequent renewal of the cold lotion. He slept for some hours, and spoke, though indistinctly; the right arm though sensible remained paralytic. The lacerated part of the dura mater and its vicinity appeared likely to slough, and at every dressing about half a tea-spoonful of brain was removed from the wound without causing pain.

On the 19th the fever was considerable, the wound dry, the dura mater tense and red. On the 20th the fever was more moderate but attended with gastric symptoms, such as foul tongue, bitter taste in the mouth, tenderness of the præcordia and region of the liver. As the enemata had not acted satisfactorily on the bowels, he was ordered to take some ounces of Laxative Infusion. Vienn. which operated and alleviated the symptoms. The wound presented the same appearance. On the 21st the patient was so much better that the cold lotions were given up. On the the 22d the wound had an irritable appearance; there was a considerable quantity of matter and a part of the dura mater seemed about to separate; portions of brain were still removed at every dressing; the pulse was about 100 and oppressed. A stimulant liniment was ordered for the arm. About noon Dr. Seiler was suddenly sent for; on his arrival, he found that the patient had been attacked by most formidable convulsions. All the muscles were in motion; the powers of sense and speech were lost. Dr. Seiler immediately resolved on removing the narrow portion of bone which lays between the two circles removed by the trepan. Scarcely was this done when the convulsions ceased, the patient awoke as from a dream, he spoke more clearly, the arm became more moveable and the pulse rose. The piece of bone had not any splinters on its under part; the pressure seemed to have been caused by the elevation of the brain and dura mater.

On the 23d the patient complained a little of headache, together with pain in

the chest, cough, and hoarseness. The suppuration was more healthy, and the wound began to granulate.

24th, the wound improved; portions of the dura mater half an inch in length had separated. 30th, all proceeding well, the wound was full of granulations, which arose from the edges of the dura mater and surface of the brain; they were very luxuriant and rose above the edges of the bone, as though pressed up by the brain. their colour was not so florid as in common wounds, but white with a reddish tinge; The wound was dressed with lint, and pressure made by compress and bandage.

Jan. 10. A piece of bone which appeared to be one of the corners left between the crowns of the trepan, appeared in the granulations and was removed by the forceps. On the 20th another portion was removed in the same way; the power of speech improved daily, and the right arm became more capable of motion. Small portions of bone continued to separate for three weeks; after that time the granulations sunk to the level of the bone and the wound began to heal rapidly. In the middle of March the patient was removed to his home some distance from Höxter. Nothing was perceptible but a depression and cicatrix of the soft parts. He was advised to wear a plate of lead as a protection.

In April, 1821, Dr. Seiler had an opportunity of seeing him and found that the depression on the head was much less, and that the edges of the bone were considerably approximated. There was an evident pulsation, but pressure on this spot did not produce any uneasiness.—(*Langenbeck, Bibliothek für die Chirurgie und Ophthalmologie.) Dritten Bandes. 3es Stuck.*

33. Dr. Schlagintweit *on Artificial Pupil.* *

At the time that Dr. Schlagintweit published his treatise † on the state of the operation for artificia lpupil in Germany he promised to communicate the results of his practice with his Iris hook, an instrument calculated for the performance of Corodialysis in a manner approaching somewhat to the operation of Reisinger. In the present essay he has acquitted himself of this engagement, and we proceed to submit it to our readers in his own words.

Of thirty operations on the eye, which I have had an opportunity of performing since my return to my native country, three consisted in the formation of artificial pupils.

The first patient was M. Kilian Gubitz, Prelate of the Chapter of Miederaltaik. In early youth he had totally lost the right eye, and in the left a soft cataract formed about the time that I dedicated my treatise "De cataractum origine" to him: this was successfully divided by my excellent teacher Walther, in the summer of 1817. Scarcely however had the patient enjoyed his sight for a month, when an arthritic Iritis took place, and in spite of the best treatment, terminated in closure of the pupil. In March, 1821, I saw the patient, and found the bulb healthy, the cornea clear, excepting at the point corresponding to the operation, the pupil almost wholly closed by a plug of puriform lymph, and the perception of light, but imperfect.

On these grounds, the prognosis was not good, and I proposed the operation only as the means of probable relief, without any risk of aggravating his condition. He gladly consented, and on the 4th of May I undertook the operation. A tolerably large pupil followed the use of the hook, in spite of the motions of the eye, and I then brought out the instrument, together with the edge of the iris, through the wound in the cornea. A small quantity of blood appeared in the new pupil, but this had disappeared by the following day. On the 9th May

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* Erfahrungen über mein Iriankistron, von Dr. Schlagintweit.

† Ueber den gegenwärtigen Zustand der künstlichen Pupillenbildung in Deutschland. München. 1818.

the patient clearly distinguished light; on the 11th, he could discern objects, and speedily, to his great joy, regained a considerable power of vision.

The second case was a leucoma corneæ, which extended from its lower segment, and occupied two-thirds of the membrane, so as to obscure the pupil completely. The upper part of the cornea appeared clear, aad when the eye was directed downwards, allowed the pupillary edge of the iris to be seen not adherent. The perception of light was perfect.

This being the case, I made an incision a line broad, with a double-edged knife, in the upper part of the cornea, and introduced my iris-hook. The eye being directed downwards, I then fixed the hook, with the assistahce of the forceps blade, in the pupiilary edge of the iris, and withdrawing the instrument, effected a prolapsus of the iris through the wound in the cornea, without the difficulty so frequently attendant on the single hook *. Vision immediately became perfect, and the patient could see all surrounding objects. On the 9th day after the operation, as no appearance of disease remained, I dismissed the patient to her home at her urgent desire.

The third case was a central leucoma with anterior synochia, the consequence of a neglected inflammation with hypopium and ulcer of the cornea. When the eye was directed downwards, the upper part of the pupillary edge of the iris was seen to be unadherent, whence I resolved on the formation of an artificial pupil; but I soon became convinced that the iris was incapable of any extension from the adhesion of its under part with the cornea, I therefore changed my plan, introduced my Iris-hook into the anterior chamber as far as the ciliary edge of the iris, and brought that part of the membrane into the opening of the cornea.

The new pupil appeared perfect, though partially filled with blood, but on opening the eye afterwards I was chagrined to find that the prolapsus of the iris had escaped from the wound in the cornea, and that in consequence the separated portion of the membrane had been left at liberty to retract to the ciliary ligament. The eye was not injured by the operation, and the patient now awaits the repetition of the Corodialysis.—(*Langenbeck Bibliothek für die Chirurgie und Ophthalmologie 3n Band. 3es Stuck.*)

34. DR. MEDORO'S *Case of Temporary Ligature.* †

The Italian Journals continue to afford instances of the successful employment of the temporary ligature in cases of aneurism. In this case a man presented himself to Dr. Medoro, aged 43, in whom a tumour in the ham had existed about 40 days; it filled that part, pulsated strongly, and was acutely painful to the touch. On the 14th of October, 1821 the pain increased considerably, and in the evening Dr. Medoro found the size of the swelling much increased, the aneurism from being circumscribed having become diffused and reaching three inches above the internal condyle. On the 16th Dr. Medoro performed the operation, exposing the artery at the upper third of the thigh, and isolating it to a small extent from the neighbouring parts. After separating it from the accompanying filament of the anterior crural nerve, he passed a flat ligature of five threads under the artery and tied them over a cylindrical compress laid on it; to this compress also a ligature was attached, as recommended by Professor Guintini to facilitate its removal. The pulsation in the

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* It will be seen from these particulars that Dr. Schlagintweit's operation of Corodialysis differs from Reisinger's principally in bringing the pupillary instead of the ciliary margin of the iris into a state of prolapsus between the edges of the wound in the cornea. For a more particular description of the operation and of the instrument we refer our readers to Mr. Guthrie's Treatise on Artificial Pupil. p. 71 &c.

† Storia d'un aneurisma al poplite operato coll' allacciatura temporaria dal Dottore S. Medoro, Chirurgo di Padova.

ham ceased completely. The wound was lightly dressed, and a compress and bandage applied. In the evening the patient was bled. On the following morning the temperature of the limbs was equal, and a slight pulsation could be felt in the posterior tibial artery at the internal malleolus. On the 19th, 80 hours after the operation, Dr. Medoro proceeded to remove the ligature. The wound was united excepting a space which would admit the point of the finger. The firm adhesion of the artery made it impossible to raise it by the ligature, but guided by the latter Dr. M. passed his finger into the wound, his nail touching the cylinder, and on it he cautiously divided the ligature with a convex-edged knife. The cylinder was then withdrawn by means of the ligature attached to it, as advised by Guintini, without which the author thinks its removal would have been very difficult from the narrowness of the wound. The edges of the incision were then brought together, and a light dressing applied. It is quite unnecessary to detail the progress of the case which was afterwards very favourable. (Omodei *Annali*)

It seems to us that the only ground of preference in the use of the temporary ligature consists in the possibility of healing the wound more quickly by the removal of a source of irritation. As to the prevention of secondary hemorrhage it does not present any advantages not attainable by the common mode of operation properly executed. As far, indeed, as our experience and information extend, secondary hemorrhage is a very unusual occurrence at the present time, in this country at least; and perhaps with the exception of the cases in which the ligature is never applied to the origin of a considerable branch. From the certainty, indeed, of avoiding this danger the proof afforded by the temporary ligature of the femoral artery is not conclusive of its superiority to the permanent one. Before we allow this fact, we must have evidence to show that the temporary may be successfully used in cases which terminate unfavourably under the permanent ligature.—*Ed.*

35. Dr. John Hume *on Cotton Down applied to Scalds, &c.*

I am not aware that it is generally known that cotton down has been used successfully as an application to burns and scalds. It is only a few days since I saw an instance of it, for the first time. A boy, seven years old, had several gallons of boiling water thrown over him, by which he was scalded from the back of his head down to the sacrum, and over the whole of his breast and right arm. In taking off his clothes, all the cuticle was separated from the skin, and the surface left raw. This was immediately bedded with cotton down, and the boy laid on his back in bed, where he lay in a state of insensibility for some days. Whenever matter began to appear through the cotton, it was removed by soaking it with warm water or hog's lard, and fresh cotton was applied. I saw him by chance seven weeks after the accident, when his arm and a great part of his body were healed; and wherever this had happened, the skin was of its natural colour and consistence, and had not the slightest appearance of having been ulcerated. How long this practice has been used here, I do not know. I thought it worth mentioning, as there used to be a prejudice against cotton as an application to sores.
Hamilton, 10th June, 1823.

36. Mr. Churchill's *New Cases of Acupuncturation.*

If acupuncturation, be established to be "so painless and convincingly efficacious," as Mr. Churchill represents it, he deserves our warmest thanks for introducing it into notice. We understand that the practice is rapidly gaining ground, and a short time will determine its character. He gives three cases of its success in rheumatism. A gardener, aged 50, had been some years subject to erratic rheumatism, which at last fixed in the left deltoid and pectoralis major, and refused to yield to cupping, blistering, guaiac, &c. A needle was pushed into the deltoid muscle, an inch in depth, when the pain entirely ceased in this part,

but increased in the pectoralis major, which was next pierced, and removed the pain altogether. In a week or two all debility had gone, and he felt no remains of the disease. The next case was that of a man aged 45, who had intense pain in his back, from working in a damp cellar. He had been subject to lumbago. Two needles were pushed to the depth of two inches into the muscles of the loins; and as this was not sufficient, other two were pushed into the lumbar muscles. A few minutes after, he said he felt no pain, but was incredulous of his cure till he found he could walk with ease. Two days after he was well enough to resume his work.—A man, aged 48, with violent lumbago, had a needle introduced on each side of the spine, and on the pain instantly shifting to the upper part of the sacrum, it was pursued thither, and dislodged by another needle. Dover's powder was prescribed, and the patient got well.

(*Medical Repository.*)

37. M. HARVING *of* MANHEIM'S *New Treatment of Fistula Lachrymalis.*

It appears, that M. Harving of Manheim, has adopted a novel, and to our English feelings, a very barbarous sort of treatment for fistula lachrymalis. An iron probe is brought to a white heat, and passed into the nasal canal so as to cauterise it in its whole extent, when there is placed in the interior a silver canula, which is allowed to remain till the cicatrization is completed. The canula is then withdrawn by a thread attached to its superior extremity, and the cure is completed. M. Harving is candid enough to confess that he has not hitherto had much experience of its efficacy, and we doubt much whether he will ever get patients to submit to have irons, at a white heat, thus thrust into their faces.

(*Hamburger Archiv.*)

38. DR. BULL'S *Case of Regenerated Lip.*

When the account of M. Richerand's case reached this country, we were all incredulous of its authenticity. The present case is valuable, as it tends to confirm the French one. A woman, aged 60, was admitted into the South Infirmary of Cork, with a cancer of the lip of two years standing, extending from one angle of the mouth to the other, and presenting a fungous-looking surface, much everted. The integuments beneath the chin were darkened, but seemingly from the irritating discharge. No enlargement of the neighbouring glands could be perceived. Dr. Bull, in presence of Dr. Woodroffe, Mr. Hobart, and several of the pupils, performed the operation, not with Richerand's flat scissors, but with the scalpel. An incision in the form of a long crescent was first made through the integuments, from one angle of the mouth to the other, and then at one stroke the tumour was detached, cutting so low as the frænum of the lip. The arteries were then secured, and the wound dressed with lint, and a bandage. On the third day healthy action was fully established, and on the twelfth, it was quite healed by granulation, and by eversion of the mucous membrane, which approximated with considerable elevation of the skin, so that a new lip was actually formed, and but little cicatrix observable. When the jaws were shut, the two lips came so near that the loss of substance is scarcely perceived; this, however, is aided by the falling forward of the jaw, common in old people. For the first six days the saliva flowed over the wound, but now she can retain it almost completely.—(*Medical Repository.*)

39. M. RITTER *on Bear's Grease applied to Specks on the Cornea.*

The medicaments usually employed for specks on the cornea are intended to act mechanically upon them, and wear them down by friction. M. Ritter proposes to soften the speck, by continuing for a considerable time the application of

a bit of bear's grease to it. In some cases, we doubt not, this or lard might be successful, and is worthy of a trial. M. Ritter, however, gives no cases in proof of its efficacy.—(GRAFE *und* WALTHER'S *Journal, Berlin.*)

40. M. CAMPANA *on the Extraction of Calculi by their largest Diameter.*

It is possible, we think, to refine too much as well as too little on important operations, and the proposal of M. Campana seems to rank in the former class. After giving a minute arrangement of urinary calculi, according as they are spherical, flat, irregular, or oval, he proceeds to prove, that it is the most adviseable to seize a calculus on extracting it by the larger, and not by the smaller diameter. For though the dilatation must be greater by the whole thickness of the two blades of the forceps, yet the forceps is usually smoother than the stone, and, therefore, not so apt to produce dangerous laceration of the sphincter vesicæ. M. Campana may in some cases be right in these speculations, but it is not, we apprehend, always in the surgeon's power to choose his diameter of apprehension, and he must often take the one which most readily offers. In such an operation, it would be preposterous to spend time on trying to ascertain the diameter of stones.—(OMODEI *Annali Universali, Milano.*)

41. M. HILDENBRAND *on the Russian Treatment of Hernia.*

The following mode of replacing incarcerated hernia is employed by the Russian peasants. They take a vessel capable of containing a few pints, make a hole in its bottom, and stop it with a cork. The parts about the tumour are then rubbed with oil or soap, and the air in the vessel being rarefied with lighted tow, is placed over the parts like a cupping glass. The abdominal parietes are of course forcibly pulled into the vessel, while the tumour is drawn into the abdomen. The vessel is then removed by withdrawing the cork, and admitting the air. M. Hildenbrand has tried it repeatedly with great success, premising blood-letting, where inflammation is present. It cannot be used in cases of pregnancy, dropsy, or much corpulence. The Russians, likewise, employ the same process in uterine hemorrhage, and spasm, which they refer to a wrong position of the uterus.

(*Svenska Läkare Salskapeto Handlingar.*)

42. M. BLAQUIERE *on Sponge, as a Cataplasm.*

When a sponge is charged with an emollient decoction, it acquires a softness and pliancy which renders it somewhat like a consistent mucilage; and besides, it applies itself with great accuracy to all the prominencies and anfractuosities of a part. Evaporation is also easily prevented by a wrapper of wax-cloth, or a simple compress moistened with the same liquid, which may be renewed every five or six hours. It may be employed in all cases where emollient cataplasms are indicated, and where it is of importance to avoid weight. In fractures it is by far the best application; and in time of war, in sieges, &c., its readiness makes it invaluable.—(*Gazette de Santé, Paris.*)

43. M. PALETTA s *Case of Glossocele.*

A girl, aged 14, had had the frænum of the tongue cut soon after birth. After weaning, she acquired the habit of sucking her finger, and, perhaps, in consequence of this, little excrescences and aphthæ appeared on the tongue, which in the end ulcerated. Her tongue, when she was brought to Paletta, hung out of the mouth upon the chin for two inches. The inferior incisors were entirely covered with a bed of calcareous matter, deposited from the copious saliva. This always disappeared in the fruit season, from her eating largely of fruits.

M. Porati, on analysing it, found it to be composed of mucus and phosphate of lime; and M. Palctta hence infers, that the phosphate of lime is secreted in the salivary glands, and then introduced into the blood by the digestive passages. The method of treatment which he proposed, was to push in the tongue, shut the jaws, and keep them in their place, by means of a bandage, and to gargle the mouth frequently with vinegar, an aluminous solution, or any other styptic. The result is not mentioned.—(OMODEI, *Annali Universali, Milano.*)

44. M. MAYER'S *Treatment of Nasal Polypus.*

The operation of extirpating a nasal polypus is not a very gracious one, nor always successful; and we therefore mention the following as doing away with its necessity, *si probatum sit.*

M. Mayer says that the *marum verum* of Linnæus powdered, and taken as snuff in the quantity of five pinches a day, is effective in removing polypus of the nose. The powder is very astringent, and produces evacuations of blood from time to time, and ends by destroying the polypus. M. Mayer gives the case of a man who had had a polypus of the nose from the age of fifteen, and which, in spite of repeated extirpations, continued to recur, though he had consulted all the best surgeons in Germany, France, and Italy. The powdered *marum* produced a complete cure, after being used as snuff for a short time.—(HUFELAND'S *Journ. Berlin.*)

45. M. PFAHLER'S *Case of Scrotal Calculus.*

A man, aged 31, had had two calculi cut out of his scrotum when he was seven years old, and was again affected with the complaint, with violent pain, dysury, and impotence. M. Pfähler cut out three calculi lying close to the testicle, and weighing an ounce and a half. A quantity of fœtid urine flowed from the wound, and with it eleven stones as big as lentils; and still more were removed on cleansing out the scrotum with lint. The parietes were much thickened, but the wound did not heal from the stillicidium of urine, till a catheter was introduced into the bladder by the urethra, and suffered to remain six weeks. The man remained well for ten years after. The case is explained to have arisen from a hernia inguinalis cystica, which disappeared after the operation.—(*Nye Hygæe, Copenhagen.*)

VI. PRACTICE OF PHYSIC.

46. M. PORTA, *of Rome, on Cold Water in Poisoning with Opium.*

We can now settle the chronology of Mr. Wray's practice in cases of poisoning with opium; though we have not the slightest doubt that Mr. Wray was quite unacquainted with Porta's case, which must have occurred at least six or seven years ago, though it is not dated. We give the case verbatim:—"Porta of Rome relates the following most remarkable case of a poisoining with opium being counteracted with cold water. Peruvian bark being prescribed for a pregnant woman, labouring under hysterics, spasms, and faintings, to be taken internally in decoction, and the powder of it to be injected per anum, she received by mistake powdered opium instead of it, of which three ounces were taken in three days. The consequence was a costiveness, against which 22 glysters proved ineffectual, and a metcorismus threatened a speedy dissolution. This dreary event being already expected, one of the consulting physicians fell upon applying fomentations to the abdomen, cold like ice, and to inject glysters of a similar nature. The glyster being just injected, fæces smelling strongly of opium were discharged, and the patient recovered."—(*Continental Medical Repertory, March*, 1817, p. 150-1.)

47. Dr. John Hume *on the Recent Influenza.*

[Dr. Most, of Hamburgh, predicted that the influenza would make its appearance last year somewhere in the North, and would advance southwards. He founded his prophecy, on observing that it has hitherto appeared every twenty years; namely, in 1742, 1762, 1782, 1802, and of course, it behoved to appear in 1822.—("*Influenza Europæa, oder Diegrösserte krankheit Epidemik der neuren Zeit. Von* G. F. Most, M.D.")—[Editor.]

Hamilton April 30th. 1823.

In the sketch I now give of the epidemic, or Influenza, which has prevailed in this neighbourhood, I describe merely what I have myself seen, and have purposely refrained from reading on the subject, or consulting the accounts of former epidemics of a similar kind which have been handed down to us. In short I have copied from nature not from books.

It will be proper to mention the state of the weather, for two months previous to its appearance, and during the two months that it has been more or less prevalent. The first case that I saw of it occurred in the beginning of March last, and then, if I except a few characteristic marks, it had much the appearance of pneumonia.

Some snow fell in January, but the weather in general was hazy, cloudy, and damp, with rain occasionally. There was little wind, Mean temperature 29 of Fahrt. mean height of the Barometer. 29. 5.8.

In February much snow fell; perhaps, in general, to the depth of two feet; but in some places where the snow had drifted, it was much deeper. The sky was often cloudy, and occasionally there was high wind and a good deal of rain. Mean temperature 27. Mean height of the Barometer. 29. 4. 8.

In March, rain and snow fell in considerable quantity. The sky was often clouded. The wind was often very high, and at such times from the S. W. Mean temperature 37. Barometer as in February.

In April, during the first days, there was a good deal of wind, and both snow and rain fell. As the month advanced, the weather became drier, but it was still cloudy and the wind was generally from E. and N. E. Mean temperature 44 of Fahrt. Barometer as in the last two months.

With the exception of slight colds, few complaints occurred in January and February, only that towards the end of the latter month, Catarrhs became more frequent.

In almost every instance, the complaint began with excessive headache, generally across the forehead and just above the eyes; and this, particularly in children, was sometimes felt a day or two before any febrile symptom made its appearance. The patient at the same time was seized with sleepiness, dizziness, dimness of sight and a degree of languor which was almost insupportable even by the stoutest frames. These were generally followed by shivering or a universal feeling of cold, accompanied by pain over every part of the body, but particularly in the knees, back, neck, and shoulders. The eyes became painful, red, and swollen, and could not bear light. The skin now became hot and feverish. The patient complained of soreness, and a kind of choking in the throat and could not speak without difficulty. There was a constant watery discharge from the nose. The eyes also watered and glistened and the face became flushed. There was a severe cough and sometimes as much pain in the chest as in inflammation of the lungs. In some instances the cells of the lungs seemed to be quite gorged with phlegm. The pulse varied from 80 to 110; and in general was strong and full when the hot stage was fairly established. In most instances the tongue was white and coated, but in children it was often little changed from its natural appearance.

There was often great oppression at the stomach, and when the patient vomited, whether naturally or from the action of medicine, pure bile, or bile of a green colour, or a putrid kind of matter was evacuated, and with the speedy remission of the most distressing symptoms. The stools were dark and fœtid. The urine

was little changed. Many patients perspired freely; others had hardly any perspiration. The cough was the most troublesome symptom and remained longer than all others.

Such was the general case of the complaint, though it was greatly modified by the constitution of the patient. In some, perhaps a week before the fever, the first symptom was pain in the fingers, gradually extending up the arm, and thence over the whole body. It also began with excessive pain in the bowels, not followed by purging. In others it began with violent pain or cramp in the stomach, followed by vomiting; and in these it had much the appearance of gastritis. In some the pain in the throat was never present. It always was in its severest form, when it attacked an already diseased habit; and in such, pustulous eruptions appeared about the mouth and nose.

It attacked every age and sex, from the age of seven months to that of ninety years; but the younger and healthier the subject, the sooner was the disease terminated. After two days illness there was sometimes a complete remission, the fever returning next day; but frequently the crisis was very sudden, a patient being confined to bed one whole day, and walking about the next, almost quite well. Relapses not unfrequently occurred: and in those the disease was often tedious. Some, after several weeks from the first attack, still complained of chilliness, want of appetite, costiveness, pain under the false ribs of the right side, and in the throat. In such persons the evacuation was very great. In some cases coldness of the limbs remained long after all feverishness had disappeared, and in others the knees felt as if they were bound firmly with plates of iron. At the beginning and towards the termination of the Epidemic, it assumed the appearance of other maladies, or was really complicated with them; with pneumonia in its commencement, and in its decline with scarlet fever, spurious small pox, laryngitis, gastritis, and gout. But with all this, I lost only one patient, a child of seven months affected with morbus cæruleus, in whom it quickly proved fatal.

In most cases, as the abdominal viscera were evidently much disordered, a smart purgative was often the first remedy employed. and always with benefit. Emetics were also sometimes used, but even these did not relieve the cough so effectually as the purgative. Wherever there appeared to be any local inflammatory congestion, the lancet was employed pretty freely, even in old people; and blisters were applied near the situation of the pain. In such cases, digitalis was used with great advantage. In children, who complained of headache, besides purgatives, leeches were applied to the temples, and saline and antimonial medicines administered with decided benefit. Indeed, saline, nitrous, and antimonial medicines were found extremely useful in all cases where the patient kept his bed and submitted to continued perspiration for a few days. In old bilious habits, calomel, joined to opium and extract of Gentian, and given night and morning till the bowels were freely opened, had frequently an excellent effect. Afterwards the infusion of quassia was taken with great advantage. In the case of an elderly person, where there was a threatening of laryngitis, leeches applied to the throat and gentle purgatives were successful. The cough was relieved by mucilaginous mixtures which contained tincture of henbane and squill, or by the syrup of squill alone, or by the ammoniated tincture of opium, or, by mixtures which contained henbane, nitrous æther, digitalis. and mucilage. However, opium was seldom used, either alone or in composition; but in a few cases after venesection, when the air cells of the lungs appeared to be much obstructed, pills composed of camphire, opium, calomel and squill, and so as gently to affect the mouth, were attended with the best effects.

48. DR. JOHN HUME'S *Cases of Cerebral Affection.*

In the two following cases the brain was considerably affected, and they terminated favourably.

D. B. B., aged 60, is of a thin and rather slender, though firm habit of body. For many years past he has lived temperately in a country residence, and has

always taken a certain degree of exercise. He has been in the East and West Indies, where he had occasionally slight attacks of liver complaint, and also, at times, a sensation as of blood rushing to his head, with headache, and a throbbing within the head, but in this country, those symptoms have not troubled him. He is habitually costive. About five years ago, he was under my care for an obstruction in his bowels, which required copious blood-letting, purgatives, and glysters. Since that time he has enjoyed good health.

On the 12th of January I was desired to see him. For some days past he has had no appetite; he has complained of very slight soreness in his throat, which is increased when any thing is swallowed; he has a slight cough, and some uneasiness, now and then, in his right side. However, on examining the side, no hardness, nor any increase of pain can be observed; nor, indeed, is any pain felt on drawing a deep breath. His tongue is white: his pulse is 72, and firm; his skin is very dry, and rather hard; his urine is natural. He attributes his complaint to the dampness of a new-built room, the mattress under his feather bed having been found quite wet; and in that room, which is up stairs, and has no fire-place, he had slept for a considerable time. Of course he was immediately removed into a large, dry apartment. As his bowels had been freely opened with castor oil, and as the fæces had no unusual appearance, I ordered the saline mixture, with very minute doses of tartrite of antimony, to be given every two hours; and I made him drink freely of water, acidulated with cream of tartar.

13th. He has been pretty quiet all night, but has had little or no perspiration. Upon the whole, there is little change in any of the symptoms. Bowels are gently open. Urine is high coloured. Pulse is 80, but uncommonly firm. On account of that, and the dryness of his skin, sixteen ounces of blood were taken from his arm, and it shewed a slight buffy coat. He seemed relieved by the bleeding. The medicine was ordered to be continued.

14th. He thinks himself considerably better. Was able to take a little weak soup and bread yesterday, with some relish. Tongue is still white. Pulse has a more natural feel. Skin is rather dry. He has no pain any where. To have a dose of castor oil, and when it has operated, to continue his mixture as formerly.

15th. Bowels quite open. When falling asleep, he is sensible of a slight confusion in his head, and uneasiness; but, if he is roused up by any thing, it goes off immediately. At times, there is a slight tendency to perspire, but nothing approaching to sweat. Pulse is natural, but still firm. Tongue white. Hardly any appetite. He has little or no cough; and were it not for a slight uneasiness in his right side, he appears to be recovering. Continue his mixture.

17th. I did not see him yesterday; but to-day he has every appearance of being better; the uneasiness in his head, in particular, having quite left him. His appetite, also, is improving, and he sleeps pretty well. During his illness, he has never felt the slightest rigor, nor has the heat of his skin been sensibly increased, nor has he had any uncommon thirst. As he feels occasional twitches in his right side, I ordered him to have eight grains of the pil. hydrarg. at bed time, and a dose of Epsom salts next morning; and this I desired to be repeated on the second night following. Apparently convalescent.

19th. I was sent for this morning at nine o'clock. Found that the pil. hydrag. and salts had operated, and that he had been amazingly well all yesterday. Early this morning he had been seized with sickness. Pulse 90; skin dry; tongue white; severe pain in the right side; slight uneasiness in his head, but not amounting to pain; face pale; thirsty. He vomited some bile of a greenish colour during my visit, and he thought his sickness relieved by the evacuation. I ordered leeches to be applied to his head, and a pill of three grains of calomel and a quarter of a grain of opium, to be given every two hours, till an evacuation downwards was procured. However, before the leeches could be applied, or the pill given, about an hour after I saw him, he was seized with violent convulsions. Mr. Weir, who was the first medical man that saw him in this state, found him comatose, and

breathing stertorously, and thought him moribund. Dr. Dalzel, however, who arrived at the same time, immediately took twenty ounces of blood from his arm, had his head shaved, and applied snow to it. The patient was about half an hour in the fit. I saw him soon after he recovered from it, and asking him how he did, he replied, "I do not know, I don't know what I feel." He then repeatedly said, "My God, what shall I do?" and whilst he was saying so, he was seized with another convulsion, which began in his eyes, and instantly spread all over him. I immediately undid the bandage of his arm, and desired Mr. Millar, who at that moment came in, to open the temporal artery and the jugular vein, and by this means we took away 30 ounces of blood; indeed we did not stop the flow of blood till the pulse at the wrist was no longer perceptible. He began now gradually to recover, and at last became much more sensible than he had been since the first fits. He said he had felt a violent shooting in his head, as of blood rushing into it, but that it was now much moderated. Before the second fit, he had taken ten grains of calomel. At eight in the morning I saw him again, by which time the calomel had operated severely. He was taken out of bed, and had a change of linen. He is quite sensible, and seems pleased with the attention that has been paid to him. A blister was applied all over his head. To take the saline mixture as formerly.

20th. Has passed a tolerably quiet night. Quite sensible, but complains much of the blister, and of shooting in his head. Pulse 100. Skin dry. To have a dose of castor oil, and when it has operated, the saline mixture. In the evening to have one of the following pills, and the other two at intervals during the night.

℞. P. Jacobi gr. vii.
Calomel. gr. iii.
Opii, gr. ii.
Syr. Sacch. q. s.
M. div. in pil. iij.

21st. Has had a pretty quiet night. Pulse 110. Otherwise much the same as yesterday. To have a dose of Epsom salts. A linen cloth, wet with a mercurial and camphorated liniment, had been applied to his right side, during the night. His tongue continues very white, and he has little or no appetite, all his food being a little gruel, panada, or bread.

22d. Mr. Millar saw him early in the morning, and finding his pulse bounding at a great rate, and a slight tendency to delirium, took about twelve ounces of blood from his arm. Dr. Dalzel and I, when we saw him at 11 a. m., though his pulse was 120, thought he could bear no more bleeding. Saline mixture to be continued. Tongue blackish and dry. Skin still dry. Bowels open. Light is disagreeable to his eyes. In the evening, pulse 110. Quite sensible, but talks rapidly. To have a blister applied betwixt his shoulders and on the back of his neck. The following bolus to be taken at twice in the night:—

℞. P. Jacobi, gr. vij.
Calom. gr. iij.
Cons. Ros. q. s. M.

23d. Rested pretty well in the night. As he complained of debility, had a little wine and biscuit, which Mr. Millar thought abated the quickness of his pulse. We have allowed him a little chicken soup. He is to take frequently a wine glass full of the following mixture:—

℞. Camph. ℈j.
Spirit. Ammon. Aromat.
Sacchar. ā ā ʒss.
Aquæ puræ lib. H. ij. M. et cola.

Pulse 110. Skin cool. Tongue rather cleaner. Quite sensible. Sleeps a little, now and then. Breathes easily. Very little shooting in his head. At stool passes much wind, but very little fæces. Some heat in making water. 8 p. m. Blisters were dressed two hours ago. Tongue dry; black in the centre; red at the point

and edges; cracked in some places. Pulse 104 not weak. Talks quite rationally, though quicker than usual. Skin dry, but it has a natural feel. No stool since the morning. Has had some weak soup and bread at times. Continue his camphorated mixture. To have a glyster.

24th. Has passed a pretty quiet night. Two stools after the glyster. Has made more urine than usual of a natural colour. Pulse 100, not weak. Tongue softer, and looking cleaner at the point and edges. Skin dry. Thirsty. Is not fond of the camphorated mixture; but has taken nearly the half of it. Eyes have a natural appearance. Quite sensible, but speaks fast. No pain in his right side.

25th. Eleven, a. m. Refuses to take castor oil. Pulse 80. Skin cool. Tongue soft. Urine natural. Continued the mixture. To have light nourishment.

26th. Eleven a. m. Restless in the night, and complained of inward heat. Had a stool at 5 a. m., which relieved him. Took 15 grains of rhubarb, which have procured several stools. Complains of great weakness, and seems to be very desponding. Tongue not so clean as yesterday. Gums and breath touched with mercury. Pulse 84, weaker. Urine natural.

27th. Rather restless all night. Complains much of the blister betwixt his shoulders, but less of debility. Gums very sore, but he has no spitting. Bowels rather open, and anus excoriated. Pulse 96, and not strong. Urine perfectly natural in colour and quantity. At present the skin is cool. Has pain in his bowels. To have a little wine.

29th. I did not see him yesterday, but I understand he was restless and heated in the night before last, which made his attendant discontinue the wine, after he had got one glass of it. Pulse was 100. Took some castor oil, which gave him some bilious stools. Took oatmeal porridge, with butter milk, and a little chicken broth and bread. To-day he feels better, inclined to sleep. Pulse 104. Tongue brown, and thickly coated. Breath much tainted by mercury. Does not feel so languid as formerly, and has very little shooting in his head.

30th. Pulse 100, not weak. Breath still offensive. Bowels very open. Has a dislike to every kind of food but oatmeal porridge and milk. Skin cool. Tongue covered with a hard crust, but cleaning at the edges.

Feb. 1st. Tendency to sleep, but quite sensible when awake, and easily awakened. Pulse 104, and rather hard. Complains much of his mouth. No stool yesterday. To have castor oil.

2d. The oil operated several times. To-day (11 a. m.) he is asleep. Pulse 78, and soft. Takes occasionally a little of the camphorated mixture. Cares little for food, but takes his porridge without dislike.

5th. For these two days past, he has slept a good deal. Complains bitterly of his mouth, which has been washed now and then with spirits and water. His tongue is very dry, and the papillæ very hard. The fœtor of his breath has greatly abated. Had an easy stool last night. Pulse 100, not weak. Acknowledges that he is better, but he is still very languid. Dislikes every kind of animal soup or jelly.

10th. For some days past there has been very little change. Mouth now is softer. Tongue clean. Bowels regular. Pulse 80, and not weak. He is very pale and emaciated.

13th. Improving in health, but his mouth is still very sore, and the centre of his tongue is covered with a thick white coat, cracked in many places. Pulse 80. Bowels have again become irregular. His porridge to be made with cow's whey, and whey to be his ordinary drink. He always sits up for a short time every day. Loathes animal food.

20th. Continues to gain strength, though slowly. Takes pease porridge alternately with his oat-meal porridge, as he still cannot bear animal food. His mouth is much better. Tongue is soft, but still coated. Pulse 80. Obliged to take castor oil every second day. He has for some days been taking acidulated decoction of

bark, and his mouth has been washed with a gargle made with tincture of myrrh, honey, and water.

March 6th. Since last report, he has continued much in the same state; only that he gains strength. Mouth is not well yet, and the centre of his tongue is still coated. Breath is not offensive. Pulse 76, and firm. Convalescent, but still loathes animal food. Has a keen appetite. Still requires laxatives.

March 9th. For some days he has complained of swelling in the left parotid, for which volatile liniment had been employed. This day Mr. Millar applied a bottle of hot water, as a fomentation, to the tumour. At 4 p. m. the patient was convulsed, and then lay in a comatose state, the convulsions recurring occasionally. Not being at home, I did not see him; but Dr. D. ordered eight ounces of blood to be taken from his arm, and his head to be shaved and covered with snow. The coma still continuing, a blister was applied all over his head at 7 p. m. At 4 a. m. next morning, the coma left him, and he spoke intelligibly to his friends.

10th. His blister has risen and discharged well. Pulse 90. A poultice to be applied every hour to the tumour. Bowels opened with oil.

11th. Great pain in the parotid gland, which is suppurating. Pulse 90. Skin dry. Tongue clean. Six leeches applied to the tumour, at 11 a. m.

12th. Pulse 80, not weak. Leeches bled well yesterday till 2 p. m. Distention and little pain in the tumour. Skin cool. Feet warm. Urine rather high coloured. Speaks hurriedly.

13th. Pulse 80. Cannot open his jaw, so as to show his tongue well. Four stools from castor oil. Complains of pain in his mouth as well as in the gland. Inclined to moan sobbingly. Tumour contains matter. Poultice regularly continued. Appetite good.

15th. For some days past, about noon, he has had threatening of his epileptic attack. Takes castor oil regularly. Porridge and milk his only diet. Had much pain in the tumour part of last night. Pulse 80, not weak.

19th. Little change; only for the two last days he has been more feverish and restless. A small opening made into the tumour, which is of great extent, stretching from above the ear half way down the neck. Pulse 74.

23d. The tumour is gradually discharging good pus. The poultice is continued, and a little castor oil is given him almost every day. He is very weak and emaciated, but his appetite is good.

May 1st. He has continued gradually to recover, and now sits up for several hours in the day. His appetite is good; but he is still much emaciated. Still occasionally takes castor oil.

Such are the principal features of what appears to me to have been a deceitful case; and though it may seem to demand it, I shall make no comment on the practice which was employed.

P. G., an unmarried female, in her nineteenth year, tall and very well formed, of a pale and rather sallow complexion, and who has hardly ever menstruated, some years ago, about the time that the menses should have first appeared, was seized with a kind of epilepsy, which occurred frequently, but oftenest in the night time, and lasting about ten minutes. She has been in the habit of taking very little exercise. She is habitually costive. Her disposition is gentle, and rather timid. To remedy the above complaints, two years ago she took a regular course of laxatives, and also tincture of hellebore and steel, but with very little effect; yet her general health was somewhat improved by them.

Feb. 10, 1823. A week ago she took a dose of jalap, by the advice of some neighbour; and after its operation, the menses appeared in very small quantity, and for an instant only; and she was soon after seized with a lameness in her left leg and thigh, which, however, seemed to be leaving her by the use of a stimulating liniment to her loins, and gentle laxatives; but having felt unwell all this day, she was suddenly seized in the afternoon with delirium, and could with difficulty be

kept in bed. When I saw her in the evening, her pulse was 110, her skin hot and dry, and her eyes inflamed; and she was talking quite incoherently. Leeches were immediately applied to her temples; the back of her neck and her back, betwixt the shoulders, was rubbed with tartar emetic ointment; and she was ordered five grains of nitre and ten drops of antimonial wine, in a glass of water, every hour and a half. The room was darkened, and she was kept in a state of perfect quietness.

11th. The leeches bled very freely last night. She is rather more composed. Pulse still quick. Eyes less inflamed, but still red. Skin moist. Tongue white, and rather dry. To have a dose of Epsom salts. She was allowed no food but water-gruel. In the evening, I found that the salts had operated well. Still incoherent. Ordered her hair to be cut out, and her head to be kept constantly covered with snow. The nitre and antimonial wine to be continued, and the tartar emetic friction.

12th. Still incoherent, but calmer. Leeches to be again applied to her temples, as her skin is hot, her pulse quick, and her eyes red. Her urine is high coloured. Tongue white. To have a dose of castor oil, and when it has operated, the nitre, &c., to be continued.

13. Slept from yesterday afternoon till 9 this morning. Quite calm. Skin cool. Pulse natural, Tongue clean. Speaks rationally, and says she has no pain. For the first time since the 10th, complained of hunger, and eat some oatmeal porridge, with milk. Her eyes are not at all red. Still to be kept quiet and dark. Nitre, &c., to be continued in half doses.

18. Till last night she continued convalescent, when in the night she had a return of her epileptic symptoms, which occurred three times in her sleep, with an interval of two hours. She complains of headache to-day. Bowels regular. To have some bark decoction. With the exception of her weekly attack of epilepsy, she has continued in her ordinary health till now, March 6th. Her bowels, however, have required frequent laxatives. The tartar emetic ointment, by the 20th of February, had produced numerous pustules, and occasioned considerable local irritation, and which is still present, though in a less degree. In the above case we have an example of what threatened to be a very formidable disease, giving way to very simple remedies; and it is on that account only that it is here narrated.

Hamilton, May 6th. 1823.

49. M. Pommer *on Antimonial Friction in Intermittents.*

During the winter of 1815, M. Pommer had occasion to treat several cases of intermittent in the army of Wurtemburgh, cantoned on the Loire and Allier, in which the bark was unsuccessful. As the fever often terminated by the breaking out of pustular eruptions, he thought it would be well to try the tartar emetic ointment, prescribed by Autenrieth in hooping cough. The first case was a soldier with a quartain, who had about the size of a nut of the ointment rubbed in on the abdomen. The fever preserved its type till the pustules appeared, when the fit was retarded an hour, and went off an hour sooner. It became gradually less frequent and less severe. Three weeks after their appearance, and after two ounces and a half of the ointment had been used, the fever was entirely subdued. He remained in the hospital another month, and had no relapse. M. Pommer treated in the same way, with equal success, tertians, double tertians, quotidians, and fevers complicated with nervous affections. The dose was never more than one or two ounces. The pustules usually appeared from the second to the sixth day.

(*Leipzig Zeitschrift für Aertzte.*)

50. M. Fontaneilles *on large doses of Tartar Emetic in Jaundice.*

Adélaide, aged 23, had suppressed catamenia in consequence of chagrin, and in two days after symptoms of jaundice appeared, with shivering and severe abdo-

minal pain increased on pressure, burning thirst, cephalalgia; tongue natural. Twelve leeches were applied inside the thighs which bled well. Next day two grains of tartar emetic were given in two pints of a bitter decoction, and at night she vomited a yellow, oily, and very bitter matter, with great relief of all the symptoms: had two grains more of the emetic. The day following, being still better, four grains more of the emetic were given. And in the evening four ounces more, and an enema with two ounces of sea salt. Next day, little change being observable, four grains of the emetic were again given; but in the evening she was much better, and had only two grains of the emetic. The next day, still improving, two grains of emetic were given. In eight days the patient was quite recovered, after having taken 24 grains of the medicine in four days. The catamenia returned, and her colour became natural, though authors mention that it takes a month to restore the natural colour. It is to be remarked that the effect of the medicine was precisely according to the account of Rasori. The first two grains produced vomiting; but though the dose was doubled and tripled, she had no vomiting until the disease was yielding, when she could not support two grains. M. Fontaneilles adds, that he has successfully used the tartar emetic as a lotion in erysipelas, phlegmon, ophthalmia, &c. in the proportion of ten to twenty grains to a pint of mucilaginous tepid water.—(*Revue Medicale.*)

51. DR. HUFELAND *on Antimonials in Inflammation.*

Before coming to his subject, M. Hufeland steps out of his way to attack our English practice in the exhibition of Calomel, and we certainly think with a great deal of justice. We have heard Mr. Abernethy in his lectures say, that he would undertake to derange the health of a robust man by a simple dose of calomel, and yet we see it every day given to infants almost indiscriminately. From the time of Basil Valentin, who wrote the Triumphant Chariot of Antimony, it was used as the principal remedy in acute fevers. In the last century, Huxham founded his treatment of inflammatory diseases of the chest on his antimonial wine; and now Balfour, Hufeland, and others, seem to take credit for the discovery, or at least for the continuance of the remedy. Hufeland says, that under the form of tartar emetic, joined with nitre, ammonia, or simple oxymel, it will, "with certainty," cure all inflammatory diseases of the chest! This is certainly too much, even for the editor of the Berlin Gazette of Health, or Magazine of Medical Wonders, as we may well call it. He is not pleased, however, with the plan followed by M. Peschier, of Geneva (*See Quart. Jour.* IV. p. 116.), who substitutes it for blood-letting and blistering. M. Hufeland, on the contrary, always commences with the abstractions of blood, general or local, according to the case, and does not, like M. Peschier, prescribe empirically, in all cases, from six to fifteen grains in six ounces of some vehicle.—(*Journal der praktischen Heilkunde.*)

52. MR. ROSS, *on Blood-letting in poisoning by Opium.*

A man, aged 40, of robust make, swallowed two ounces of laudanum, in a fit of intoxication. About an hour and a half afterwards he had emetics given him, by Mr. Milner, of sulphate of zinc, in scruple doses, which operated copiously. When Mr. Ross was called, two hours after, he was lying comatose with every appearance of hopeless compression of the brain, and to attempt to relieve him Mr. Ross abstracted sixteen ounces of blood, which raised his pulse and diminished the oppression. During the night they practised continual agitation, and exhibited diluents with small doses of sulphate of zinc. He was able to walk home with support next morning, and recovered soon: no acids were used, in obedience to the directions of Orfila and Sertürner, that acids increase the power of opium. Mr. Ross thinks this case confirms the experiments of Orfila, who tried blood-letting on the lower animals to which he had given opium. The present case differs from the two similar ones, where venesection proved beneficial, published by Mr. Richard-

son, in that the patients were delicate females, one of whom had taken half an ounce, and the other two drachms of laudanum.—(*Edinburgh Medical Journal.*)

53. Mr. Armstrong *on Metastasis of Rheumatism.*

A young soldier, slender and delicate, was seized with acute rheumatism of the superior extremities, with pyrexia, thirst, furred tongue, &c. He was immediately bled to twenty-four ounces, and had a brisk cathartic. Next day, as he was no better, the same quantity of blood was taken, and he was ordered a quarter of a grain of tartarized antimony every three hours. The day following, slightly better; the antimonial continued, and twelve grains of Dover's powder to be taken at bed-time. Next day still better, had a brisk dose of calomel and colocynth. Next day pain about the heart, for which he was bled and the antimonial continued. The pain about the heart, with great vascular action, induced Mr. Armstrong on the day following to take forty ounces of blood, which did not much affect the pulse or produce syncope. Next day digitalis was added to the antimonial, and thirty six leeches were applied to the region of the heart. On the seventh day he died. The heart on dissection was found enlarged and the surface covered with coagulable lymph.—(*Medical and Physical Journ.*)

Dr. James Johnson, in giving an abstract of the case, judiciously remarks that detracting large quantities of blood in acute rheumatism, is very frequently productive of metastasis to internal organs and particularly to the heart. Large bleedings indeed, will not subdue either acute rheumatism or gout, as it will a common inflammation, and if it is not subdued, it will after the depletion be apt to assail some weak internal part. Dr. Johnson thinks Mr. Armstrong did not recur to local bleeding early enough, and it does not appear that he tried blisters or to affect the system with mercury—(*Medico-Chirurg. Review.*)

54. Dr. Hufeland *on the Fatal effects of Hydro-cyanic acid.*

In a case of phthisis, Hufeland prescribed eight drops of prussic acid, in eight ounces of water and two ounces of syrup, of which mixture the patient took a table spoonful every two hours. Scarcely was the second spoonful taken, when all the symptoms of paralysis of the lungs supervened and the patient died in about six hours. In a second case, a negro, at the commencement of a phthisical affection, had three spoonfuls a day of a mixture of two drachms of prussic acid in eight ounces of water. On the second day, he became very weak; on the third, still more so; and on the fourth, he died with all the symptoms of a total loss of sensibility. M. Hufeland thinks that these two cases ought rather to put practitioners on their guard than deter them from using this powerful medicine. He promises a work in a short time in which he will give the result of his observations and experiments, with the acid for two years; stating its advantages and disadvantages in the treatment of various diseases.—(*Journal der praktischen Heilkunde.*)

55 M. Crane's *Case of Boulimia.*

A lady, aged 26, had her appetite morbidly increased that she took three or four pounds of meat at a meal, exclusive of bread and vegetables. She commonly vomited after each meal, and the ejecta were mixed with a glary, albuminous, and sourish substance. Many physicians were consulted, and much medicine taken without the least effect. A continued fever at length supervened, and produced a complete disrelish for food; but as soon as it subsided, the boulimia returned as violent as ever. Dr Crane inferred from this that there was a peculiar irritability of stomach which was increased by food. He therefore tried, but with no success, to confine the patient to liquid aliment of a mild nature, such as milk and arrow root. He next tried soups and nutritive enemata. This was more effectual and he gradually allowed bread and other solid food. In six weeks, the appetite be-

came natural, and has now continued so for nine years.—Boulimia is often caused by organic malformations. M. Landrè-Beauvais gives a case of a phthisical patient who had been boulimious all his life; he died, and on dissection it was found that he had no gall-bladder and that the duodenum adhered to the liver. The intestines were unnaturally voluminous.—(HUFELAND'S *Journ.* and *Diction. de Med.*)

56. DR. HOWISON'S *mode of removing Ascarides.*

As it appears indelicate to Dr. Howison to use glysters to expel ascarides from the rectum, he advises the mechanical employment of the finger, having first smeared it and the anus with candle-grease or lard. The patient is to lie on his back, with his thighs elevated and push the finger into the rectum, in such a manner as to secure all the ascarides which are to be brought out on the point of the finger. This is to be repeated every night, till the brood of ascarides is completely dislodged. In the first place, as to the delicacy of this proposed plan, we think it greatly more indelicate than an enema; and in the second place we are quite certain that it cannot be so effectual, and we have known it tried without success. He confesses that the irritation of the finger causes an increased secretion of mucus which in our opininn is the foundation of the whole disease, and it will consequently, on Malthus's principles of population, only increase the colony of ascarides by supplying more food and shelter. Dr. Howison would have done well to think of this before he recommended his novel method.—(*Edinb. Med. and Surg. Journal*)

57. DR. YEATS'S *Case of a Painful Affection of the Brain.*

In February, 1819, a gentleman, aged forty, had symptoms of dyspepsia, which gradually began to affect the head. Laxatives, local blood-letting, and blisters, were tried, but with little relief, and the affection in the head increased, with deep-seated pain and heat, commencing at the back part of it, and becoming diffused over the whole cerebellum, often causing insufferable agony for two hours together. The crown and fore part of the head were not affected. The pain was most severe about four o'clock in the morning, and was aggravated by a horizontal position. On stooping he had confusion and giddiness. He would not submit to lose blood, as it already failed to relieve him. A seton was therefore advised, and introduced by Sir A. Cooper. The patient was put on a low vegetable diet, and requested to keep *continually* in the erect position without going to bed, and to have his head, which was shaved for the purpose, unremittingly moistened with a cold lotion, consisting of a solution of muriate of ammonia, vinegar, and water. This was regularly persevered in for a week, with so great relief that he was gradually permitted to sleep in a horizontal posture. The seton was kept in for two months. The only medicines taken were occasional purgatives, and super tartrate of potass as a diuretic to carry off the effused serum which, according to Dr. Yeats, is always more or less present in the brain in such cases. The gentleman recovered, and continued well up to last year, since which Dr. Yeats has not heard of him.—(BRANDE'S *Journal of Science.*)

58. MR. STERRY'S *fatal Case of Constipation and Stricture of the Colon.*

This case is very interesting, as it shows that even the most enlightened practitioners, after the most careful inquiry, may fail in their diagnosis. The patient was of plethoric habit, and for some time had had griping pains in the bowels. He was once or twice bled, and had repeated cathartics, the most powerful which could be devised; among others, the croton oil, without effect; and, besides, Mr. Sterry, was attended by Drs. Maton and Walshman, and Sir A. Cooper, who were unanimously of opinion that the disease was intus-susceptio.

His pulse ranged from 100 to 130, and he had much vomiting for two days. His head was never affected, and he was perfecty tranquil, when not racked with flatulent griping. He died on the 21st day of the treatment, and on dissection, all the intestines except the rectum, were so distended with air, that it was difficult to cut through the peritonæum without injuring them. The sigmoid flexure of the colon, immediately above the rectum, where the derangement commenced, was much distended, and the cæcum enormously enlarged. At the termination of the sigmoid flexure, and the beginning of the rectum, a stricture was found, completely encircling and obstructing the intestine, which was very much ulcerated. The inner coat of the intestine was also thickened, and had a carcinomatous appearance. This was the sole cause of the constipation, and of the fatal issue. But little of the quicksilver, which had been given with a view to weigh down the supposed intus-susceptio, could be found, except in the small intestines; but the whole canal was so loaded with fermented matter, that it could not be sufficiently examined.—We make no comment.

(*Medical Repository.*)

59. Dr. Bruckmann's *Case of the Regeneration of Mercury.*

A woman, who had been under a course of mercury for syphilitic leucorrhœa, till she was slightly salivated, was about a year afterwards at a ball, and while dancing, she all at once felt an unpleasant sensation of coldness in the pit of the stomach. On coming home, and undressing herself, she found the skin of her chest and the chemise which was in contact with it, covered with black stains, and in the plaits of the chemise running globules of mercury. On applying the nail to the black stains in the skin, small metallic globules were pressed from the pores.—(*Petersburger Vermischte Abhandlungen.*)

VII. MIDWIFERY.

60. M. Richter *of* Moscow's *Case of Pregnancy, with Prolapsus Uteri.*

A woman, who had long laboured under a complete prolapsus uteri, it hanging down between the thighs, except when she lay in a recumbent position—became pregnant. The pendent uterus was observed to enlarge with the growth of the fœtus, but when she was gone about half her time, it retracted itself, and ascended upwards into the pelvis, so that about the seventh month not a vestige of the prolapsus was visible. On delivery, M. Richter found the orifice of the womb towards the left; the head entered the pelvis obliquely, and forcibly drove forth the left and anterior part of the lower segment, obstructing the passage of the urine. He made her assume a lateral posture, in order to obviate the oblique position of the uterus, and drew off the urine by a catheter, keeping back, during each pain, the parts which had been forced down. In this manner, he succeeded in effecting delivery. The prolapsus again appeared as soon as the patient was able to be out of bed.—(*Petersburger Vermischte Abhandlungen.*)

61. M. Lavagna *on Ammonia as an Emenagogue.*

Since the time of Astruc, who asserted the rare success of emenagogues, it has been considered almost hopeless to try the medicines of this class, formerly in repute. M. Lavagna has endeavoured to revive the reputation of emenagogues by proposing the injection of ammonia into the vagina. He gives 14 cases of amenorrhœa, in which this succeeded, sometimes in twenty-four hours, and at most in

five or six days, not only to produce the discharge, but to remove the paleness, the oppression, the difficulty of breathing, the anorexia, the weakness, &c. The same success was experienced in all sorts of temperaments, plethoric, bilious, pituitous, and their complications. The proportion employed was ten or twelve drops of alkali, in two spoonsful of warm milk, often repeated in the course of the day. It generally produced in the vagina a sensation more or less painful, according to the strength of the mixture and the sensibility of the part; but in no case was any thing dangerous or troublesome produced.—(*Biblioteca Italiana.*)

62. Dr. Hintze of Waldenburgh's *Case of Mammary Menstruation.*

A young widow—mother of two children, one aged 6, the other 10, of delicate constitution, of an ingenious mind, of strict moral character, and always regular in menstruation—caught cold while unwell, which stopped the discharge without any other troublesome symptom for the time. The next time the menses flowed from the nipples in the usual quantity, but without any other derangement of health; and for several years, in spite of all that could be done by emenagogues, the same phenomenon continued. It is said to have been cured by the Altwasser waters.—(Rust's *Magazin der Heilkunde.*)

63. M. Bigeschi *on Ergot of Rye in Parturition.*

This author reports favourably of the ergot of rye, in promoting the contractions of the uterus, when administered in doses of 25 or 30 grains. A smaller dose he says only fatigues the uterus. M. Bigeschi limits its exhibition, of course, to cases of natural labour and favourable presentations. We do not perceive that he makes sufficient distinction when it ought and ought not to be given; but he has established, contrary to the experience of M. Legonais of the Hospice de la Maternité, that it is sometimes useful, and that it is not followed by any troublesome sequelæ.—(*Journal Général de Méd.*)

64. Drs. Schneider *and* Henkelbein *on Ergot of Rye.*

When delivery was retarded by insufficiency of the pains, in uterine hemorrhage and retention of the placenta, the secale cornutum was found to be a medicine of considerable power. The mode in which it was used, was to put a drachm finely powdered into a quantity of water (how much is not said) in a phial hermetically closed, and boil it down to four ounces. This seems to be an impossible processs. The taste of it is said to be insipid, and the colour peach-like. The four ounces are divided into three doses, and given every twelve minutes.—(Rust's *Magazin der Heilkunde.*)

65. Dr. Stearns, of New York's *Rules for using Ergot of Rye.*

According to Dr. Stearns, who has written an intelligent paper on the Secale Cornutum, it is indicated—1. When, in lingering labours, the child has descended into the pelvis, the parts being dilated and relaxed, the pains having ceased or being too ineffectual to advance the labour there is danger apprehended from delay by the exhaustion of strength, and vital energy, from hemorrhage or other alarming symptoms.—2. When the pains are transferred from the uterus, to other parts of the body, or to the whole muscular system, producing general puerperal convulsions.—3. When in the early stages of pregnancy, abortion becomes inevitable, accompanied with profuse hemorrhage, and feeble uterine contractions.—4. When the placenta is retained from a deficiency of contraction. 5. In patients liable to hemorrhage immediately after delivery.—6. When the hemorrhage or lochial discharge after delivery is too profuse from the relaxed state of the uterus.

The Ergot is contra-indicated.—1. When nature is competent to a safe delivery.

2. When the regular pains have not ceased to be effectual.—3. When the rigidity of the os tincæ has not subsided and perfect relaxation not been induced.—4. When in the first stages of labour, the os tincæ is not dilated to the size of a dollar.—5. When the presentation is preternatural.—6. It should never be given in larger doses, than 30 grains by decoction in half a pint of water, a table spoonful every ten minutes.—(CHAPMAN'S *Journal.)*

66. M. PERCY'S *Case of Superfœtation.*

A woman became pregnant, for the third time, in July 1820; and without any remarkable symptoms, felt the movements of the fœtus quite distinctly about the fourth month. These were felt most vividly on the right side, but after continuing lively for some time, gradually became more feeble, and at last entirely ceased, for which no cause could be assigned. In seven weeks after, all the symptoms of a fresh pregnancy were observed, and she was in consequence much distressed; but without any uncommon occurrence she completed her nine months of this second pregnancy. She was attended by Dr. Cochard, of Lagny, and Dame Robert, a midwife. She had an easy and rapid labour, and was delivered of a small, lively male child. When the midwife was about to leave her, fresh pains came on, during which there escaped from the uterus a number of black, unorganized coagula, which were succeeded by a black, flocculent, spongy mass, in the middle of which was a female fœtus, seemingly of the fourth month, and well preserved. The midwife took it with her to keep it as a relic of this singular case. The boy was nursed by his mother and throve well.—(*Revue Médicale Française.*)

67. M. ROAGNA'S *Singular Case of a Fallopian Conception.*

A healthy Spanish woman became pregnant for the third time, and had all the common symptoms without any unusual feelings. At length she was seized with pains, which were believed to be those of parturition, but ended by an evacuation from the uterus of a fluid tinged with some blood. She afterwards had milk fever, and her breasts filled with milk. After this period she menstruated regularly for six months, when the catamenia ceased without any assignable cause, and was succeeded by a discharge somewhat resembling that of leucorrhœa, with diarrhœa, tenesmus, and acute pain in the uterine tumour and region of the sacrum. In the beginning of the second year she was seized with continued fever, the pains in the sacrum being still more severe. What is most remarkable is, that at this time she voided by the rectum several amorphous bones, without cartilage or covering. On carefully examining the parts, M. Roagna discovered that twenty-one lines from the anus, the rectum was perforated for about six lines, and that the bones had made their way from the left Fallopian tube through the perforation. Several bones were voided, up to the third year after conception.—(*Decadas Médico-Quirurgicas & Revue Medicale.*)

68. M. HUFELAND *on the Methods of procuring Abortion.*

After a display of eloquence in deprecating the abuse of the knowledge of the means for procuring abortion, by miscreants, who murder embryos in silence and secrecy, M. Hufeland goes on to enumerate the causes of abortion, such as violent bursts of passion, privation of nourishment, hemorrhages, falls, shocks, &c. The artificial imitations of these are numerous, and have been infinitely varied, among which, are leaping from a height, violent exercise, such as dancing, riding on horseback, or in a cart without springs over a rough road, drastic purgatives, such as aloes, savin, and hellebore, strong emetics, carbonised and chalybeate waters, to excite uterine plethora, blood-letting from the feet, leeches to the privities, injections &c. To produce menstruation alone, will often suffice, and M. Hufeland, who has a stronger belief than we have in the efficacy of emenagogues, says, that

this is always in the power of the practitioner, and that he ought therefore to be much on his guard, when called to a supposed case of suppressed menstruation, to ascertain whether or not there be pregnancy. He has seen a case of this kind in which the patient had an abortion two hours after taking a strong emetic. He then gives cases in which pregnancy was mistaken for dropsy, and treated with drastic purgatives, without any injury either to the mother or child.—We think the very enumeration of these violent means would deter any body but a brutal villain from the attempt, and yet we fear that it is but too common, not among professional men (God forbid) but among the more unprincipled part of our population. Glauber's salts is, in these cases, the usual purgative made use of, and we have heard of this medicine being taken in such cases in doses almost incredible. The guilty mother is of course always endangered by these means, and the person who is accessary to the crime, runs the hazard of perpetrating a double murder.

(Journal der Heilkunde)

69. MM. JULIA & ROAGNA *on Calcareous Concretions in the Placenta*

The same accoucheur from whom we have taken number 67, has repeatedly met with calcareous concretions, and even small calculi in the placenta. He attributes this to the new wine of Brischerasco near Pinerolo, but M. Julia thinks this altogether improbable, as we cannot suppose the acid of the wine to act on the phosphate of lime in the bones; nor are we at liberty to call the human body, a chemical laboratory.—(*Decadas Medico-Quirurgicas and Revue Med.*)

VIII MEDICAL JURISPRUDENCE.

70. M. ESQUIROL *on the Marks of Hanging before and after Death.*

The examination of a woman who hanged herself at the Salpêtriére, and whose body did not present the marks given by authors—led M. Esquirol to make the following observations, which are of considerable interest in Medical Jurisprudence. The body still preserved all the traits of life, not only for some minutes after death, but even for some hours afterwards. On the first inspection, the trace of two turns of the cord were seen on the neck, though these were neither deep, nor was the skin discoloured. Seven or eight hours after death, the discolouring and swelling of the face, the livid hue of the feet, and the stiffness of the limbs, began to be perceived. There was no ecchymosis around the neck; and the sugillation observed at the instant of death had disappeared at the time of opening the body, twenty-four hours after. Then the traits of the face were little altered; the skin, which had become smooth where the impression of the cord had been, was neither livid nor ecchymosed, but as if it were burnt. The meninges were very little injected; the brain not at all; the lungs and heart were void of blood; the right ovary alone was gorged with dark blood. Now from these appearances it would have been concluded by those who knew not the circumstances, and were guided by the diagnostics of the writers on Forensic Medicine, Alberti, Zachias, Louis and Petit, Fodéré, Vigné, Belloc, &c., that suspension had taken place *after* death. The cause of these erroneous diagnostics, is first, that they have uniformly supposed that strangulation and hanging produce genuine apoplexy, and they have, therefore, given the marks of the latter to the former; and secondly, that they have only examined the bodies of those who have been suspended for some time after death, and the cord, of course, continued around the throat. In which case, there will be swelling, and lividness of the face, sanguineous foam at the mouth, the limbs stiff, and their extremities livid; but these depend upon the continuance of the cord till the body be cold.

M. Esquirol thinks that he is therefore justified in concluding — 1st. That the diagnostic marks laid down by authors to distinguish suspension before and after death, are by no means precise enough to be trusted. 2d. That ecchymosis round the neck is not a constant mark, and must, as De Haën thought, be considered only as an equivocal sign of suspension before death. 3d. That when a practitioner is called to see a body which has been found suspended, he ought to reckon as nearly as possible from the hour of death, and the time the cord has remained round the throat, as these two circumstances must be the foundation of his judgment concerning the case.—(*Archives de Medicine.*)

71. Drs. Christison *and* Coindet *on Oxalic Acid.*

The following are the methods proposed by our authors for discovering the presence of oxalic acid in the stomach—premising, however, the important remark, that death may be caused by a poison—no part of which may be traceable afterwards in any part of the body. The stomach is to be washed with pure water, and if disorganized, preserved for analysis. The whole is to be boiled separately, a little pure water being added, if necessary. If chalk or magnesia has been used as an antidote, what remains on the filter (except that from the tissues) is to be preserved for analysis. The filtered fluid is to be tried first with litmus paper, and then by the hydrochlorate of lime, the sulphate of copper, and the nitrate of silver. 1. Decolourize the fluid, if necessary, with chlorine. The hydrochlorate of lime, dropped into a solution containing oxalic acid, or an oxalate, especially the latter, throws down an insoluble oxalate of lime. It also precipitates with the carbonates, sulphates, phosphates, tartrates, citrates, and with all their acids but the carbonic; but while the nitric acid will not take up the sulphate of lime, a few drops of it will dissolve the oxalate. The hydrocholoric acid will not dissolve the oxalate, unless added in very large quantity, while two or three drops will take up the carbonate, phosphate, tartrate, or citrate. 2. Decolourize a second portion of the fluid with chlorine. The sulphate of copper precipitates oxalic acid blueish-white, and the oxalates pale blue. This test is very useful, since the sulphate of copper does not affect fluids that contain sulphuric, hydrochloric, nitric, tartaric, citric acids, or their ordinary salts. But it precipitates the carbonates, and throws down phosphoric acid, whether free or combined. The oxalate, however, is easily distinguished as above. 3. The nitrate of silver produces a heavy white precipitate with oxalic acid, and still better with the oxalates; and this precipitate, when dried and heated over a candle, becomes brown on the edge, then of a sudden fulminates faintly, and is all dispersed in white fumes. This is a very charateristic and delicate test. From a quarter of a grain of oxalic acid, dissolved in 4000 parts of water, we have procured enough of the powder to show its fulmination twice. The precipitation alone cannot be trusted to; for it may equally take place with the hydrochloric, phosphoric, citric, or tartaric acid, and likewise with the alkalis. But when the test of fulmination is tried, there is no chance of its being confounded with any of these, except, perhaps, with the tartaric and citric acid. The nitrate of silver, however, becomes brown under exposure to heat, froths up, then deflagrates slightly, with the discharge of white fumes, and a large quantity of dull, ash-grey, crumbling matter remains, of very peculiar fibrous structure. The tartrate of silver becomes brown, and froths up like the citrate, white fumes are discharged without even deflagration, and there is left an ash-coloured botryoidal mass, encrusted outwardly with silver.

If magnesia or chalk has been given as an antidote during the patient's life, the oxalate of magnesia or lime may be mingled, in the form of powder, with the contents of the stomach, or with the vomited matter. The powdery matter is then to be separated by elutriation from what remains upon the filter during the previous process. If magnesia has been employed, boil the powder in pure

water for a few minutes, and then subject the filtered fluid to the three tests described above; for the oxalate of that earth is sufficiently soluble to furnish, even with a single ounce of water, a solution in which all the foregoing characters may be observed. If chalk has been employed, then the powder is to be boiled 15 minutes with half its weight of pure subcarbonate of potass dissolved in 20 or 30 parts of water. A mutual interchange then takes place, and the solution contains oxalate and carbonate of potass. In applying the tests to this solution, the free alkali is to be previously neutralized with hydrochloric acid, when hydrochlorate of lime or sulphate of copper is to be used; and with nitric acid, before using the nitrate of silver. In the last case, there ought to be as little excess of acid as possible, because the oxalate of silver is soluble in nitric acid.

(*Edinb. Medical Journal.*)

72. DR. HASLAM *on Unsoundness of Mind and Imbecility of Intellect.*

The introduction of the term unsoundness, to denote a particular state of disordered mind, which is supposed to differ from idiotcy and lunacy, has, according to Dr. Haslam, been the source of considerable perplexity to medical men; and opens, as he thinks, an avenue for ignorance and injustice. Figurative terms, indeed, introduced under a loose analogy, always tend to error and confusion. In the Portsmouth case, lately tried by commission, this confusion was notorious, several medical witnesses deposing that Lord P. was of sound mind, and others, that his mind was thoroughly unsound. Dr. Haslam, therefore, solicits the Lord Chancellor to elucidate the nature of this unsoundness of mind on the first opportunity, that medical men as well as jurymen may know what it is, and depose accordingly. We are glad to hear Dr. Haslam saying in the most decided manner, that he is certain the indications of craniology on the subject, will never be accredited in a court of justice, while the Lord Chancellor guides the helm. Lunatics, according to vulgar, and even legal opinion, are at times insane, and at times of correct intellect; but Dr. Haslam says, that the changes are only remissions and exacerbations of insanity, and are most erroneously supposed to depend on the changes of the moon. Mere *imbecility*, says the Lord Chancellor, or inability to manage a man's affairs will not amount to evidence that he is of unsound mind, "which is "some such state as is to be contra-distinguished from idiocty;" but this state is not defined, though the Lord Chancellor in the Portsmouth case, in Jan. 1823, says expressly, "incapacity to manage his affairs, being considered as evidence of unsound mind."—Dr. Haslam has not solved, nor attempted to solve the difficulty, nor unravel the confusion; but he has distinctly shown what is wanting.

(*Letter to the Lord Chancellor.*)

73. *Action against a Physician for Maltreatment.*

We think it useful to mention this case (the names of the parties we think it better to omit)—to show our readers that the law takes cognizance of the kinds and quantities of medicines exhibited. The patient, who brought the action, had been in a state of temporary derangement, and established by evidence, both that he was brutally treated by a keeper appointed by the physician, and that he had been over dosed with mercury. The latter was deposed to by another physician, though the counter-evidence of an eminent surgeon was given in favour of the treatment. The friction of the mercurial ointment had been performed by the keeper till the latter was salivated. The case went against the physician—damages 50*l.*, costs 40*s*, The physician moved afterwards for a new trial, on the plea of some flaw in the patient's evidence, but it was refused.

IX. MATERIA MEDICA AND CHEMISTRY.

74. M. Dobereiner's *New Apparatus for making Extracts.*

A tube of glass, from four to nine lines in diameter, and from four to nine inches long, is closed below by a cork, to which is adapted a small tube, open at both ends, but covered at the upper with a piece of muslin. This communicates with the large tube, into which the substance to be operated upon is put, filling it half full, and pouring the solvent over it. A small glass bulb, proportionate in size to the quantity of solvent used, is then emptied of air by heating a few drops of alcohol in it, and immediately attached by a tight cork to the lower end of the small tube. The whole is then set aside in a cool place, and as the alcohol condenses, a vacuum is produced, and the pressure of the air in the large tube forces the fluid through the substance to be operated upon in the bulb. In a few minutes the extraction is complete. Quantities, from 10 to 200 grains, may thus be extracted by water, alcohol, or ether.—(*Bibliotheque Universelle.*)

75. M. Carminati *on Colchicum as an Anti-Phlogistic.*

This is merely a repetition of the experiments of Mr. Haden, with the bulb of the colchium autumnale, in cases of acute inflammation, though Professor Carminati seems to claim it as his own discovery. He prescribes it under the form of oxymel of colchicum. In three cases of acute peripneumony, with serous effusion and suppression of urine, he was successful in subduing the disease by this alone, which he prescribed in the dose of a scruple every three hours, in a cooling draught, increasing gradually to two, and four scruples, and even to two drachms at once, and two or three ounces per day. His success in these cases led him to try it in dropsies, both general and partial, and in organic inflammation, in subjects of different age, sex, and temperament; and he assures us that the effects were beyond his anticipations.—(*Memor. Instit. Milan.*)

76. Mr. Faraday *on Condensation of the Gases.*

Mr. Faraday has succeeded in condensing chlorine into a liquid. For this purpose a portion of the solid and dried hydrate of chlorine is put into a small bent tube, and hermetically sealed: it is then heated to about 100, and a yellow vapour is formed, which condenses into a deep-yellow liquid heavier than water, (sp. gr. probably about 1.3.) Upon relieving the pressure by breaking the tube, the condensed chlorine instantly assumes its usual state of gas or vapour. When perfectly dry, chlorine is condensed into a tube by means of a syringe; a portion of it assumes the liquid form under a pressure equal to that of four or five atmospheres. By putting some muriate of ammonia and sulphuric acid into the opposite ends of a bent glass tube, sealing it hermetically, and then suffering the acid to run upon the salt, muriatic acid is generated under such pressure as causes it to assume the liquid form: it is of an orange-colour, lighter than sulphuric acid, and instantly assumes the gaseous state when the pressure is removed. By pursuing this mode of experimenting, sulphuretted hydrogen, sulphurous acid, carbonic acid, cyanogen, euchlorine, and nitrous oxide, have been also found to assume the liquid form under pressure, and to appear as limpid and highly mobile fluids. It is probable that other gases may be condensed by similar means, and that nitrogen, oxygen, and even hydrogen itself, may yield, provided sufficient pressure can be commanded. Some of Mr. Perkins's experiments render it more

than probable that atmospheric air, under a pressure of some hundred atmospheres, changes its form; and it is not unlikely that some very curious and interesting results may be obtained, by the aid of a slight modification of the apparatus used by him, in his researches, connected with high-pressure steam.

(BRANDE'S *Journal of Science.*)

77. M. MAGENDIE *on Strychnine and the Resin of Nux Vomica.*

The cases in which strychnine may be used, are, according to M. Magendie, general and local diseases of debility, particularly in all kinds of paralysis. The mode of employing it is in pills, containing from a twelfth to an eighth of a grain, and it is necessary, to make them keep, to cover them with gold or silver. The formula is

℞. Strychnii purissimi gr. ij.
Conserv. Rosar. ʒss.
M. et divide in pilul. xxiv.

For the Tincture of Strychnine:—

℞. Alcoholis (36° cent.) ʒj.
Strychnii gr. iij.
Dose from six to twenty-four drops.

The resinous extract of nux vomica has similar properties to the strychnine, but it has the disadvantage of varying in its medicinal strength; whereas the strychnine is uniform. M. Edwards cured with it a case of amaurosis, complicated with paralysis of the superior palpebra. M. Magendie has seen it useful in impotency, incontinence of urine, and in drowsy debility and dyspepsia. A single grain, in form of pill, given at night, is the dose for producing tetanic symptoms, though it may be increased from four to thirty-four grains, according to the quality of the medicine, and the strength of the patient. To produce the milder effects, half a grain, or a grain daily, is the proper dose. The tincture is prepared thus:—

℞. Alcoholis (36°. cent.) ʒj.
Extract. Sicc. Nuc. Vomicæ, gr. iij. (*Formulaire.*)

78. M. DOSMOND *on Pepper as a substitute for Cubebs.*

Substitutes, we have often remarked, are inferior to originals; but experiments of this kind often lead to discoveries of value. M. Dosmond has remarked that common pepper is more hot and aromatic than cubebs: and that like it, in gonorrhœa, &c., it has a specific action on the mucous membrane of the urethra. When it produces a purgative effect, M. Delpech found that it did not cure gonorrhœa, but it succeeded best when the inflammation of the urethra ran high. M. Delpech also remarked, that it had, like copivy, no effect on the gonorrhœa of women, and accounts for this, from the female genital organs being more excluded from the atmosphere. This we cannot understand. M. Dosmond was successful in the cases in which he administered the pepper. He gave it in doses of from seven grains to a drachm. He used it also with good effect as an external irritant in paralysis.—(*Revue Medicale.*)

79. MESSRS. COWLEY *and* STAINES *on English Opium.*

Messrs. Cowley and Staines, of Winslow, Bucks, in the year 1821, produced 60 pounds of solid opium, equal to the best Turkey opium, from rather less than four acres and a half of ground. This seed was sown in February, came up in March, and, after proper hoeing, setting out, &c. the opium gathering commenced at the latter end of July. The criterion for gathering the opium was

when the poppies, having lost their petals, were covered with a blueish-white bloom. The scarificator, an instrument containing five small blades, was then applied to them; horizontal incisions being preferred, because the juice was not apt to run from them before inspissation. After being scarified in one aspect, the head was left until the juice was coagulated (about two hours); it was then removed by gatherers, and fresh incisions made on other parts. The poppies were found to produce opium freely until the third or fourth incision, and some of them even to the tenth. Opium was gathered daily, until, at the rate of 30*s.* per pound, the produce would no longer bear the expence. Ninety-seven pounds and one ounce were procured, at an expence of 3*l.* 11*s.* 2½*d.*; and this, when evaporated sufficiently in the sun, produced above sixty pounds of properly dried opium.

The quantity of opium consumed in this country is supposed to amount annually to about 50,000 pounds, exclusive of exportations. On the moderate calculation of ten pounds per acre, that quantity would only require four or five thousand acres of land, and from forty to fifty thousand people. The employment would be given to such persons as are not calculated for common agricultural labour, and at a time when labour is wanted, namely, between hay-time and harvest.

(*Transact. Soc. Arts.*)

80. M. Durozier's *New Method of preparing Nitric Acid.*

M. Durozier placed a tubulated retort, containing about six pints, in a sand bath; the neck entered directly into a serpentine tube, to the other end of which was adapted a receiver, placed in a vessel fitted to keep it cool. At the superior part of the receiver was a safety-tube, communicating with a flask containing a little alcohol, for the purpose of absorbing any ether which might escape. The apparatus being thus arranged, he took three pounds of alcohol at 36°, and mixed with it one pound eight ounces of nitric acid at 32°. The whole was introduced into the retort, and immediately after he poured twelve ounces of concentrated sulphuric acid upon it; the tube was adapted and secured with lute. Five minutes after the introduction of the sulphuric acid, ebullition became manifest; streaks of ether marked the sides of the retort; and soon after it flowed abundantly from the inferior extremity of the tube. When the ebullition had ceased, he removed the contents of the receiver, and found it to weigh twenty-three ounces; he then agitated it with an equal quantity of water, and, after standing for a moment, the ether floated pure and limpid at the top. When separated, it weighed ten ounces three drachms. MM. Faguer and Petroz, repeated the experiment with much care, and are assured that by this means "may be obtained, very quickly and with great facility, a much more considerable quantity of nitric ether than by any other process known."

(*Journal de Pharmacie.*)

81. M. Legras *on Syrup of Acetate of Morphine.*

Dissolve four grains of acetate of morphine in an ounce of distilled water, cold; and add fifteen ounces of common syrup. The transparency will not be altered; the taste will be slightly bitter, and leave a slight astringency in the throat. The salt itself ought at first to be employed in small doses, such as the eighth of a grain. Six drachms, divided in doses, of the syrup of morphine, prepared as above, M. Legras says, has cured a diarrhœa which had continued many months. The salt employed to the extent of a grain a day has never been observed to produce any symptoms of narcotism, though often employed in the dose of two drachms.—(*Cercle Medicale.*)

X. BOTANY.

82. MR. JAMES *on the Colour of Alpine Flowers.*

On the Rocky Mountains, a little above the point where timber disappears, a region of extraordinary beauty commences—intervals of soil, of some extent, covered with low, creeping, matted, Alpine plants of astonishing brilliancy of colouring. Deep blue prevails, and the *Pentstemon erianthera*, the *Aquilegia cærulea*, and other plants, were more intensely coloured than in lower situations. May it not be, that the deep blue of the sky, the atmosphere being for the most part clear and unclouded, influences the colour of this Alpine Flora?

(*Expedition to the Rocky Mountains.*)

83. DR. YULE *on the Internal Structure of Seeds.*

Dr. Yule has laid a paper before the Wernerian Society of Edinburgh, in which he undertakes to describe more accurately than has hitherto been done, the internal structure of seeds, having detected numerous vascular receptacles for the various plumules of seeds, so that when one plumule is destroyed, another is developed, which explains the cause of many shoots issuing from one seed. No less than 21,109 shoots have been produced by division from one grain of wheat, all of which have produced ears of corn. In this point of view wheat is a branching plant, the branches proceeding from the base of the culm.—(*Edin. Literary Gazette.*)

XI. ZOOLOGY.

84. DR. HELENUS SCOTT *on the Guinea Worm.*

Dr. Scott has given a very interesting account of the formidable dracunculus of the tropics. He says that it breeds in the moist earth during the rainy season, and that a medical friend of his saw a native gardener dig up a number of these worms on the coast of Malabar, of which he collected a number, and preserved them in spirits. There could be no doubt of the identity of the animal with that found in the human body. It is probable that the eggs or young of the Guinea Worm live in water, or moist places; and hence the Indians, who walk bare-footed, are much infested with them. The cellular membrane under the cutis is its proper nidus; but it often goes deep into the cellular substance between the muscles, as in the socket of the eye, the mouth, the cheeks, or below the tongue. The first symptom of it is a small blister, which, when broken or irritated, produces intolerable itching over the whole body, so as almost to drive the person mad. Dr. Scott, in this case, describes his own feelings while suffering under this intolerable itch. When the animal has been partly extracted, it has not the power of retracting itself, though it has of advancing—a circumstance of the greatest importance in practice; for if it is wound, as is often done, round a quill, and secured, it irritates the animal; and as it seems to have the power of communicating its disagreeable feelings to the patient, it is often productive of troublesome consequences. It is elastic, but it ought never to be stretched. The native surgeons try to trace its convolutions under the skin, and, cutting down upon it, are often able to extract it at once, if in a soft part; but when it is on the hands or feet, and warped round a bone, this is impossible, and its extraction may be tedious, and even dangerous. It is best to draw out as much of it as will come easily, and cut it all off but about a quarter of an inch, over which a poultice may be put. This does not kill it, but it sometimes dies, and produces inflammation and abscess in

the part. It will, of its own accord, come out slowly, like the hour hand of a watch. When extracted, it soon becomes stiff, and dies.

(*Medico-Chirurgical Review.*)

85. Blumenbach *on the Prickle in the Lion's Tail.*

Homer, Lucan, and other ancient authors say, that, when a lion is enraged, he stimulates himself with the blows of his tail. Didymus, of Alexandria, in commenting on the passage in Homer, says that the lion has a black prickle in its tail, among the hair, like a horn. This, which was supposed to be mere poetical fiction, has been proved to be correct by the recent observations of Blumenbach, who found in a lioness which he dissected a very small dark coloured prickle at the very end of the tail, and as hard as a piece of horn. The minuteness of it, however, makes it impossible that it could be used as Lucan describes. Dr. Brewster and Mr. Jamieson say they have observed a similar prickle at the end of the tail of the leopard.—(*Edinb. Philosoph. Journal.*)

86 Dr. Knox *on the Spur of the Ornithorhynchus Paradoxus.*

The Ornithorhynchus paradoxus, or duck-billed platypus, of New Holland, has since its discovery, been a standing puzzle for naturalists. A quadruped, with a bill like a duck, and webbed feet, destitute of mammæ, &c., could neither be ranked with the mammalia nor with birds. The dissection of one by Dr. Knox, of Edinburgh, has thrown some light upon its history, particularly upon a singular spur situated upon each of the hinder legs of the male, and supposed by Cuvier to be what he calls a sexual prehensile, or instrument for laying hold of the female. To overthrow this notion, late investigation has proved it to be a poisonous organ; and Dr. Knox's dissection has confirmed this, by showing that the spur is open at the extremity, and furnished with a canal, through which passes a bristle shaped membrane that may answer the purposes of a sting, united at its base to a duct that communicates with a poisonous gland in the body of the animal, hitherto supposed to answer a different purpose. The spur is, therefore, an instrument of defence.—(*Report of the Wernerian Society.*)

XII. MISCELLANEOUS.

87. Cuvier's *Account of a Fossil Human Skeleton.*

The only place where human bones have been found imbedded in rocks, is the island of Guadaloupe, in the calcareous strata of whose shores several have been found, particularly one which was discovered and preserved by the directions of M. Ernouf, governor of the island, and which passing into the hands of the English at its reduction under Lord Cochran, is now in the British Museum. At the peace, M. Donzelot was directed by the Minister de la Marine, to send one of these fossils to France, and his researches have been successful in finding a more perfect one than that found by M. Ernouf. It wants the cranium, but the greater part of the upper jaw, with some teeth, is preserved. The rest of the skeleton is in a bent position,—almost that of a semi-circle. It was quite hid in the calcareous stone; but the bones had suffered no change, possessing their gelatinous animal matters, and their inflammability. The stone contains besides, well preserved specimens of both the sea and land shells still common in the island, a fact which proves that the skeleton is recent.

(*Report of the Institute of France.*)

88. *True scurvy in the Milbank Penitentiary.*

It is a very singular fact, and highly worthy of attention, that the genuine sea-scurvy has lately appeared, and even raged in the Penitentiary at Milbank,

in consequence of an attempt to feed the inmates chiefly on vegetable food, aided probably by confinement, and the gloomy and depressing passions inseparable from it, together with the low, damp, situation of the buildings. The prison contains about 850 convicts, chiefly young persons, not yet hardened in crime, and whom it may be possible to reform. Formerly the daily allowance to each was 20 ounces of bread; 3½ ounces of dressed meat; 1 pound of potatoes; 1 pint of broth; and 2 pints of gruel or porridge. This, however, was found expensive, and Mr. Copeland Hutchinson (the medical superintendent) was consulted upon what reduction this allowance could bear, with due regard to the health of the convicts. Mr. H. gave it as his opinion, that the bread and gruel should continue the same; the quantity of broth to be doubled, allowing six ounces of meat to the pint; no broth on Sundays, but eight ounces of boiled meat without bone, and a pound of boiled potatoes. Mr. H. at the same time advised the Committee to consult Dr. Wollaston, Sir G. Blane, Sir E. Home, Dr. Baillie, and Mr. Cline, on the subject. This did not satisfy the committee, and they established as the new system of reduced diet, 9lb. 3oz. of bread per week, or a double quantity of potatoes; 6½ pints gruel; 12¼ pints of broth, made with two ox-heads, for every 220 persons. Now allowing one ox-head to contain 9lbs. of animal food, making a daily allowance of 2 ozs. and two-thirds of undressed animal food to each couple, that is, they were allowed no animal food in substance. M. Magendie and Dr. W. Philip found that by feeding dogs wholly on the richest soups and most concentrated beef tea, that they could soon starve them to death; the Milbank Committee, though sanctioned, as they aver, by the "best medical opinion" (whose is not said)—soon found that sea-scurvy, under some of its worst forms, was the consequence. At present, there are about 200 cases of scurvy, scorbutic dysentery, diarrhœa, and hermeralopia; and since January, 27 have died of these complaints. The odium of the affair, in fact, began to spread, and Mr. C. Hutchinson, has been forced to defend himself from imputed concurrence in the measure, by an appeal to the public.—Such a detail is most lamentable, but it requires no comment.—(*Medico-Chirurgical Review.*)

89. MR. WEISS'S *Improved Surgical Instruments.*

We are happy to concur with so many of our professional brethren, in expressing a very high opinion of the excellent instruments manufactured by Mr. Weiss of the Strand; and have to thank him for the figures of some of them, which are introduced in this Number of our Journal. The Female Dilator, mentioned in the case operated upon by Sir A. Cooper (*Quart. Journ. IV.* p. 568), will, by turning the handle to the right, open to any extent. The instrument marked A. was made curved, at the suggestion of some gentlemen who prefer it of this form. The hernia knife C., Fig 1. and 2., can be covered on the cutting part, by pressing and pushing forward the small button, an improvement suggested by Mr. Bransby Cooper. It is important to add, that since Sir A. Cooper's case of dilatation of the female urethra, the instrument has been successfully employed by Mr. Brodie, Mr. Green, and Mr. Phillips, in extracting female calculi, without having recourse to the knife. The figures of these calculi will be seen in the plate. Mr. Weiss has also made a similar instrument for extracting calculi by the male urethra, and dilators for strictures and phimosis, the plates of which we shall probably be able to give in a succeeding number.

90. SIR. WILLIAM BLIZARD'S *Oration.*

This periodical eulogium on the celebrated John Hunter, savours we think more of French than of English taste, and we could wish the oration were turned to some other account than telling, in eulogistic phrase, what the greater number of the auditors have known for years. Why not enjoin the lecturer to give a critical account of the most important discovery in surgery or physiology since the preceding oration? This would more effectually eulogise the memory of

Hunter than running over the tale that has been so often told. Why not mention the late experiments on absorption, which have thrown more than doubts on Mr. Hunter's opinions on that subject? Sir William Blizard was not, however, appointed to do this: what he did do was excellently suited to the professed object of the oration, and his exertions deserve every praise.

91. *Medical and Chirurgical Society of London.*

The anniversary meeting of this Society took place on the 1st of March, when the following Members were elected Officers for the ensuing year:—

President, John Abernethy, Esq., F.R.S.—Vice-Presidents, William Prout, M.D. F.R.S.; Peter M. Roget, M.D. F.R.S.; Thomas Chevalier, Esq. F.R.S.; Thomas Copeland, Esq.—Treasurers, William Somerville, M.D. F.R.S. Lond. and Edin.; William Lawrence, Esq. F.R.S.— Secretaries, James Alexander Gordon, M.D.; Henry Earle, Esq.—Librarian, Samuel Cooper, Esq.—Other Members of the Council, Charles Bell, Esq. F.R.S. Edin.; George Birkbeck, M.D.; John Cooke, M.D. F.R.S. F.A.S.; Sir Alexander Crichton, M.D. F.R.S. F.L.S.; David D. Davis, M.D.; John Elliotson, M D.; John Gunning, Esq.; Halliday Lidderdale, M.D.; William Macmichael, M.D. F.R.S.; Benjamin Travers, Esq. F.R.S.; John P. Vincent, Esq.

92. *Medico-Botanical Society of London.*

At the meetings of this Society, on the 25th of April, and 9th of May, Sir Alexander Crichton, M.D. F.R.S. in the Chair.—Mr. Frost, the Director, read a paper on the essential oil of bitter almonds, with which he made some experiments. A paper was read on Atropa Belladonna; and another by Mr. P. J. Brown, on several medicinal plants used by Swiss Practitioners. Mr. Frost also read a paper on Stalagmitis Cambogeoides, and on Acorus Calamus.

XIII. CHARACTERISTICS OF NEW BOOKS.

93. *An Essay on the Medicinal Efficacy and Employment of the Bath Waters; illustrated by Remarks on the Physiology and Pathology of the animal Frame, with reference to the Treatment of Gout, Rheumatism, Palsy, and Eruptive diseases.* By Edward Barlow, M.D. Graduate of the University of Edinburgh, M.R.C. Ireland, one of the Physicians of the Bath Hospital, &c. pp. 200. 8vo. Bath. 1823.

We have so many every-day compilations on this very trite and uninteresting topic, that we are glad to see Dr. Barlow has followed a more scientific and enlightened plan. We would have been better pleased if these eternal Bath waters had occupied a secondary place in the title page, as they certainly do not make the leading subject of the book.

94. *Further Observations on Strictures of the Rectum, with remark on the opinions of some late writers relative to the situation of the Disease; and also on Spasmodic constriction of the Sphincter Ani; with a Translation of M. Boyer's valuable paper on that complaint: accompanied with several cases, and an engraving.* By W. White, M.R.C. London, Corresponding Member of the London Medical Society, and one of the Surgeons to the City Infirmary and Dispensary, Bath. 8vo. pp. 105. Bath. 1822.

Mr. White's former publication on this subject is well known; and this is equally worthy of attention, as serving in some measure to complete a monograph

on a species of diseases which have hitherto been but ill understood, and little inquired into. A valuable paper, by Boyer, on a cognate subject, will be found in the third volume of this Journal.

95. *Pathological and Surgical Observations on the Diseases of the Joints.* By B. C. BRODIE, F.R.S. Professor of Anatomy and Surgery, to the Royal College of Surgeons, and Surgeon to St. George's Hospital. *Second Edition, with alterations and additions.* [Plates.]. 8vo. London. 1822.

We are exceedingly glad to see this improved edition, of Mr. Brodie's work, which is a masterly specimen of Pathological Surgery. It forms an excellent companion to Sir A. Cooper's splendid work on Dislocations, the second edition of which has, we understand, been already sold off. We do not think, however, that Mr. Brodie has exhausted the subject, and the inquirer into these diseases will find many excellent remarks in Mr. Lloyd's work on Scrofula, which are no less accurate than original, to which Mr. Brodie has not alluded, perhaps, because he was more anxious to give his own observations, than undertake the drudgery of compiling.

96. *Advice to Young Mothers on the Physical Education of Children* By a Grandmother. pp. 374 12mo. London. 1823.

Books of this description have of late been prodigiously on the increase, and when they are written with accuracy and intelligence, are calculated to be very useful. It is unfortunate, however, that they are oftener compilations than derived from judicious experience. The Grandmother is certainly a woman of great experience and observation, and we are convinced, from internal evidence, that the title is not, as we have heard alleged, a *nom de guerre*. Her medical receipts, we observe, are antiquated, and, as was to be expected, seldom accurately prescribed. She should have left all this alone, and kept to her cleanliness and bathing, and the mode of dressing infants on a cushion, which is really excellent. "A little learning is a dangerous thing:" she expressly says there is no danger in allowing the placenta to remain several days, and blames the common anxiety about it as a vulgar prejudice. (Page 6.) We are aware that Dr. W. Hunter tried this practice for some time; but we need scarcely say that it was soon discarded. She also talks of "the impossibility of producing indigestion by plain sugar" (Page 267.) ! ! ! !—The best popular medical observations relative to children which we have lately met with, are continued through several Numbers of Mr. Haden's Journal of Popular Medicine. We would advise Mr. Haden to print them separately: he could not confer a greater favour on intelligent mothers.

97. *The Elements of Pharmacy, and of the Chemical History of the Materia Medica: containing an Explanation of the Chemical Processes of the London Pharmacopœia on the different Theories received at present; the Chemical Properties of the various Articles of the Materia Medica of the London College, and of other Drugs that have been lately introduced into practice; a Description of the most approved Furnaces, &c. &c.* By SAMUEL FREDERICK GRAY, Lecturer on Materia Medica, Botany, and Pharmaceutic Chemistry. pp. 340. 8vo. [with Plates.] London. 1823.

Mr. Gray's well known Supplement to the Pharmacopœia's, is an excellent practical work, though rather bulky. The present work, though by no means so valuable or useful, contains plain descriptions and details of the various articles mentioned in the lengthy title page, and will be found of considerable advantage to students, apprentices, and young apothecaries.

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THE

Quarterly Journal.

N° XX. OCTOBER, 1823. Vol. V.

Foreign Review.

Boyer on Strangulated Hernia*.

The works of Boyer are, we believe, as well known in Britain as in France, and their merits equally well appreciated and understood. The present volume is devoted to the surgical diseases of the abdomen, of which hernia is the chief; and to diseases of the kidneys and ureters. We believe little is now wanting to render this system complete but the diseases of the bladder and urethra, which—if we may be allowed to conjecture what an author is likely to perform—will occupy another volume only. Of this system, as presenting a complete view of modern surgery, it must be admitted, that it is by far the best which we possess, as well with regard to execution as to completeness. There is almost nowhere any great pretensions to originality, which, indeed, is not much wanted in a systematic work; but we everywhere meet with the convincing proofs of the author's extensive acquirements and information, both as regards the surgery of France and other countries—of a clear and unbiassed judgment on all the debated points of surgery—not merely the judgment of a man learned in books, but of one who has observed disease extensively for himself: and the whole is presented to the reader in a style at once clear and elegant,

* Traité des Maladies Chirurgicales, &c., par M. le Baron Boyer, Professeur de Chirurgie-pratique, Chirurgien en chef de l'Hopital de la Charité, &c. Vol. VIII. à Paris, 1822. pp. 559.

and totally devoid of those marks of presumption and conceit, which appears to adhere so closely to most of the second rate writers of France. We have observed, that in nothing do the French so far outstrip us as in their systematic treatises and text books; and in these, it is but justice to confess that they leave us far behind. Is it the Englishman's pride of heart, which makes him despise the humble labours of the compiler, which is the cause of the barrenness of our medical literature in text books?—or is it his dread of being set down as a systematist, or, what in many people's minds is equivalent—an old woman? Whatever be the cause, certain it is, that our medical science, considered as a whole, is in this respect exceedingly defective. That it arises from want of capacity—the requisite to write systems—no one will admit, who is at all conversant with the works of Dr. Good, or Dr. Thomson—works, indeed, which affix eras and land-marks to the progress of science, and associate the names of their authors with all her richest discoveries. It is our wish, as it is our duty, to guard British science from unmerited reproach; but it is equally imperative upon us to point out its defects, which, indeed, is the first step towards their removal.

To give a critical analyses of the whole of the volume before us, is out of the question; we shall therefore proceed to give such parts of it as may best display the merits of the author, and, at the same time, when brought together, form the most useful article to our readers—the two objects which we think a reviewer ought chiefly to have in his mind. The section comprising strangulation, as refers to hernia, and that upon diseases of the kidneys and ureters, appear to us to merit the preference; and the last has the advantage of forming one of a series of articles embracing all the diseases of the urinary apparatus. (*See our articles* DUCHAMP *and* BINGHAM, *in a preceding Number.*)

STRANGULATION of a HERNIA, according to Boyer, is the complete, or almost complete, interception of the course of the fœcal matters in the intestines; a definition which appears to us to be imperfect, in as far as it applies to one of the symptoms of the intestinal hernia only, and that perhaps not the most important. The causes of this strangulation are classed according to their seat: some take place in the herniary opening; others in the peritoneal sac; and a third class in the intestine or omentum which the hernia may contain. Strangulation is also sometimes the result of the accumulation of certain substances within the tumour.

It was long thought that, in umbilical and inguinal hernia particularly, the exclusive causes of strangulation were inflam-

mation and contraction of the aponeurotic fibres which surround the herniary openings; but it is now well known that the aponeurotic fibres are very little susceptible of inflammation, and that, instead of possessing a power of contraction, they have a perpetual tendency to dilate. It is to be observed, however, that in many strangulated herniæ the displaced parts are strongly compressed by the aponeurotic opening, the surrounding fibres acting by virtue of their elasticity, and rendering it indispensible to dilate them to remove the constriction. It is further to be observed, that, though these fibres themselves are susceptible of no active contraction, yet they may come to exercise a pressure analogous to a muscular ring, in consequence of muscular fibres being continuous with the aponeurotic. It is only in recent herniæ, however, and those which are kept habitually reduced, that the aponeurotic ring preserves sufficient straitness to re-act upon the escaped organs; when old and unreduced, there is generally a tendency in the ring to dilate.

The peritoneal sac may be the agent of strangulation in hernia, by the spot which corresponds to the ring becoming thickened, and resistant; so that if, by any cause, the herniary contents become augmented in bulk, the unyielding neck of the sac produces a degree of constriction sufficient to give rise to all the symptoms of strangulation. This thickened neck of the sac (the *collet* of our author) usually corresponds to the herniary opening, though it is sometimes situated higher or lower: in the last case it is possible to recognise it before an operation; in the first, the operation may be finished, and the fact remain unknown, unless by the continuance of the symptoms, or sometimes by death, though usually its existence is ascertained during the operation, and the symptoms which it causes consequently removed by incising it.

Scarpa, in his treatise on inguinal hernia, has endeavoured to establish certain symptoms which may lead us to suspect, before the operation, whether the strangulation is caused by the neck of the sac, or by the aponeurotic opening. If, says he, the hernia has appeared in infancy, and has attained a considerable volume in a short time; if, after having remained long reduced, it suddenly re-appears during some effort on the part of the patient; if, by the finger, we discover that the edges of the aponeurotic opening are neither tense, nor closely applied upon the viscera; if, in our attempts at reduction, the viscera re-enter incompletely, and form a small tumour beyond the herniary opening, painful to pressure, and which disappears as soon as the parts are allowed again to issue;—we have good grounds to believe that the strangulation is produced by the neck of the

sac, and not by the aponeurotic opening. It is seldom, says Boyer, that all these symptoms meet in the same case; and the presence of one or more is insufficient to lead even to a rational conjecture. It is observed by both these authors, that the strangulation is sometimes owing to both causes at once—a circumstance which it is of consequence the operator should recollect.

Accidental adhesions between the walls of the sac, or between these and the viscera, especially when under the form of bridles, or ligamentous cords, sometimes cause strangulation, in consequence of the intestine getting between one of these bridles and the sac, or becoming twisted around it; cases of which are described by Scarpa.

Some facts would lead us to believe that the sac may be ruptured, and the intestine yet strangulated in this accidental opening. I. L. Petit mentions a patient, in whom the upper part of the herniary sac was ruptured by a kick from a horse; and the viscera, escaping by this new opening, penetrated into the cellular tissue, and descended as low as mid-thigh. A similar case, which occurred in the practice of M. Boyer, is related by M. Rémond, in the *Journal de Médecine* for April, 1808. An infirmary man, aged 60, was incommoded from infancy with an inguinal hernia of the right side. This person had observed, for a long time, that pressure made upon the tumour caused it to ascend above the inguinal ring. This tendency increased so much, that, during the latter period of his life, he was obliged to compress the displaced viscera from above, downwards, in order to approach them to the inguinal canal. In fine, during a violent effort, the hernia became strangulated. Its form, when then examined, was singular: it extended upwards from the inguinal region, towards the umbilicus; and, on examination, it was easy to perceive that it was covered only by the skin. The operation being judged necessary, was performed by M. Boyer. The sac being opened, the incision was prolonged towards the umbilicus, in the whole extent of the tumour; a fold of intestine, five inches in length, was then exposed, of which only a very small part was contained in the true herniary sac; the rest had escaped by an accidental opening at the upper part of the sac, and had insinuated itself under the integuments and the aponeurosis of the external oblique muscle. The constriction was relieved, and the intestine reduced: the patient, however, did not survive the operation, and at the inspection of the dead body, this accidental rupture of the sac was clearly recognized.

The intestines themselves may be the agents of strangulation, either in consequence of certain adhesions which they may form, or from the descent of a new portion of intestines, which com-

presses the first. In mixed hernia the omentum may occasion strangulation, either by simple increase of its bulk, producing pressure, and consequently disturbing the function of the intestine; by its becoming schirrous; by its forming adhesions and ligamentous bands, which act as those of the sac; or, in fine, the omentum may be ruptured, and the intestine, introducing itself into the rupture, become strangulated. Scarpa found, in one case, that the intestine had passed through the torn epiploon without being strangulated, though the ring formed by the rupture was thickened and indurated. In a case detailed by Baudelocque, strangulation was the immediate consequence of the rupture, from inflammatory swelling of the torn part; though in cases detailed by Arnaud and Callison, strangulation seems to have been the consequence of progressive thickening of the edges of the ring. The explanation, how cases of this sort occur, is simple. In many cases, the epiploon surrounds the intestine like a pouch: say that in these circumstances it contracts adhesions to the neck of the sac, and the patient makes some strong contraction of the abdominal muscles as in pregnancy, for example—it is clear that the intestine will be pushed violently against the omentum, prevented by its adhesions from yielding, and may rupture it. When the surgeon is called upon to operate in such cases, he finds the relations of the facts totally changed; in an ordinary entero-epiplocele, the omentum is found covering the intestine, as it naturally does in the abdomen, while in the case we speak of the intestine is more external, at least all below the part where the rupture has taken place.

Accumulation of matters in the loop of intestine forming the hernia, or the lodgement of foreign bodies there, sometimes also produces strangulation; as also collections of gas in the displaced intestine; inflammatory swelling of its coats; or, in short, any cause which augments the bulk of the herniary contents. According to Scarpa, strangulation sometimes occurs from the thickening and induration of the cremaster muscle and cellular substance exterior to the peritoneal sac, which the employment of ill-fitted bandages produces; the indurated part sometimes forming a circular stricture, at others a narrow elongated tube, in which the slightest augmentation in the bulk of the escaped parts causes the strangulation.

Some very curious and interesting cases of strangulation from the spontaneous reduction of hernia, have been recorded. In one of these, by Lobstein, the patient had a hernia on each side: during a sudden effort both disappeared, and all the symptoms of strangulation supervened. The hernia were again made to

descend, and afterwards reduced with care, when the symptoms did not return. M. Boyer mentions a case which Chopart used to detail in his lectures. A very large hernia disappeared suddenly and spontaneously, and was followed by all the symptoms of strangulation. Every effort was tried in vain, to procure its descent; the patient died, and, at the inspection of his body, it was found that the intestine, in returning, had passed *behind* a transverse bridle, *before* which it had passed in issuing, and that this bridle was the cause of the strangulation. As to the spasmodic strangulation particularly mentioned by Richter, M. Boyer thinks that it possesses too little of a distinctive character to merit particular consideration.

The common symptoms of strangulation, are, impossibility to reduce the tumour; pain more or less acute, extending from the strangulated to the adjacent part, most sensible when the patient coughs or is erect; sensibility and tension of the tumour; anxiety, nausea, vomiting, fever, suppression of the stones, tension of the abdomen, and cough. These symptoms vary according to the degree of inflammation present, or, as M. Boyer says, according as the strangulation is inflammatory, or by *engouement*, the generic term which he applies to strangulation in old voluminous hernia, of which the opening is large, and in which the strangulation is more immediately produced by the accumulation of stercoral matter in the distended intestine. In these cases the symptoms of strangulation show themselves slowly, and are preceded by augmentation in the bulk of the tumour; there is little pain for some days, either in the tumour or in the abdomen; nausea and vomiting at last supervene, but in a moderate degree; fever, also, which is mild; and very frequently, if nothing is done to relieve the patient, inflammation at last occurs, and the symptoms then become as pressing as in the case which is inflammatory from the commencement. M. Boyer justly attaches considerable importance to the new character which the disease thus assumes; and guards the young surgeon against remaining inactive at this crisis, as the success of the operation, which is generally now necessary, is able to be much influenced by the loss of even a few hours.

The inflammatory strangulation, for the most part, occurs suddenly in recent hernia, whether small or large, or in those which, having been retained some time by a bandage, re-appear suddenly during some violent effort, especially in young plethoric subjects. The constriction in these cases is such that the circulation in the blood vessels is arrested, as well as the course of the alvine matters; the tumour becomes tense and painful; even the integuments are sometimes red and tense;

nausea and painful vomiting supervene, first of alimentary matter, then of bilious and glairy matters possessing a fœcal odour; the pulse becomes hard, small, and quick; the abdomen tense and painful; the fever augments; hiccup succeeds; the features change, and the strangulated parts speedily fall into a state of gangrene. In some cases the symptoms are so intense, and their progress so rapid, that patients have been known to die within the first day from the attack. On the contrary, they are sometimes so mild, that death does not occur till the eighth day, or later. These insidious cases merit the practitioner's particular attention, because the symptoms are exceedingly liable to assume a sudden degree of intensity.

Strangulated hernia is usually easily distinguished, unless when the tumour is so exceedingly small as to be overlooked. On the other hand, practitioners sometimes attribute too much to the hernia, in those cases when there is a gastric derangement, or vomiting, which may occur in individuals with hernia as well as in others, and yet be wholly independant of the hernia. Reduction affords a satisfactory test, that these symptoms do not arise from strangulation when it can be effected, but the impossibility to reduce a hernia in the same circumstances leaves the diagnosis still doubtful, as this hernia may have been long adherent and irreducible. If the hernia has become suddenly irreducible, and the symptoms of ileus are present, the presumption that there is strangulation is strong. Pott gives us the case of a young man, who for some years was subject to an irreducible hernia, in whom suddenly occurred vomiting, obstinate constipation, and tenderness of the whole abdomen, while the hernia itself remained without pain and tension. At a consultation, most of the practitioners proposed the operation; but Pott opposed it, and it was deferred. Next day the patient died: the intestine and the epiploon contained in the hernia were perfectly sound; but the jejunum contained in the cavity of the belly was inflamed and gangrenous. In another case, nearly similar, the operation was practised; the herniary contents were also quite sound, and were reduced without the necessity of dilating the ring. The patient died on the following day, and the colon, within the cavity of the abdomen, was found gangrenous. In these doubtful cases we ought, says Boyer, to ascertain if the pain was first felt in the abdomen, or in the hernia; if the hernia continues soft while the abdomen becomes tense; if the symptoms appear suddenly, without any effort on the part of the patient, and without augmentation of the tumour; if the herniary opening remains free, and we can distinguish, with the finger, no tension at the neck of the sac; and, finally, if the symptoms have begun in the abdomen, and

have extended more lately to the hernia; all which circumstances indicate that the symptoms do not depend on the hernia, but upon some affection supervening in the abdomen. Inflammation occurring in the hernia itself might be very apt to be mistaken for strangulation; but in fact the one almost uniformly produces the other, as all experienced practitioners know, and then the indications are the same.

What we have most to fear in strangulated hernia, is inflammation, which is more especially dangerous in strong vigorous subjects; when the strangulation is produced by the ring or the crural arch, and takes place suddenly in consequence of some violent effort, or of a fall; and above all, when it occurs at the moment when the hernia is formed. Pott has seen in such a case, gangrene supervene within eight hours. In old voluminous hernia, the danger of strangulation is seldom pressing, as the ring has usually lost its elasticity and is so much enlarged that it hardly ever exercises a violent constriction on the parts which it embraces. From the difference of anatomical structure in the two sexes, it arises, that strangulation of an inguinal hernia is much more serious in woman than in man, and *vice versa*. An enterocele, when strangulated, is uniformly more dangerous than an epiplocele: in the former the danger is often greater in proportion as there is less of intestine contained in the sac; in the latter, strangulation is rarely mortal. In mixed hernia, the epiploon serves sometimes in some degree to protect the intestine from the ruder effects of compression.

Diseases of the Kidneys and Ureters.

In a state of health, the quantity of the urine passed in a day generally measures between a third and a half of the liquid and solid ingesta; but it varies much according to age, climate, the state of the alvine and cutaneous evacuations, and so forth, and these variations may be considerable, without implying a state of disease. When the secretion of the kidney is excessive, and the urine is loaded with a saccharine matter, the disease is named diabetes; and opposed to this we have suppression of urine when this fluid is not secreted at all, or but scantily. We do not mean to follow M. Boyer in his disquisitions on diabetes, as we do not find that he has advanced any thing very interesting on this subject; but we shall confine ourselves to those diseases of the kidneys and ureters more strictly surgical.

SUPPRESSION of the URINE is most frequently the effect of other diseases which exercise more or less of influence upon the functions of the kidneys; it is an affection of the secretion, as retention is of the excretion; it may be complete or incomplete, according as the secretion is completely arrested, or only in part;

of the one kidney only, or in both—though ordinarily, when the functions of one kidney are disturbed, those of the other suffer through sympathy, so that what was at first an incomplete, becomes a complete suppression. When this affection attacks suddenly both kidneys at once, the state of the patient is perilous in the extreme. To ascertain that a patient labours under suppression, who has rendered little or no urine for some days, we should attend to the following symptoms: softness and want of tension in the epigastrium; the bladder loose and flaccid, which may be ascertained either by applying the hand above the pubis, or per anum; the patient having no desire to void urine; the introduction of a catheter procuring the issue of no urine, or but of a small quantity, which may have been in the bladder at the moment the suppression occurred. To these are added the symptoms which belong to the disease, of which the suppression is the result, and which differ according to the seat and nature of these diseases. In ascites, for example, the secretion of the urine is always diminished, sometimes entirely suspended. The suppression, according to M. Boyer, sometimes precedes the hydropsie, which then appears to be owing to the *reflux* of the urine; sometimes it succeeds, in which case it is probably the effect of the dropsy. We presume to think that in most cases the suppression is a symptom of the dropsy, unless when the dropsy as well as the suppression depend on some organic lesion of the kidneys.

The cause of the suppression which we sometimes encounter in hysterical and hypochondriacal patients, is obscure. M. Boyer thinks it should be attributed to spasm of the uriniferous ducts, which renders them impermeable to the urine. All we dare venture to say to this is, that it may be so. When the suppression is complete, it is usually attended with the most dangerous symptoms, unless the place of the urinary secretion be supplied by some other serous evacuation, diarrhœa, sweats, vomitings, &c., in which case the malady may persist for months, or years, without producing death.

Wounds of the kidneys are rare, in consequence of the deep situation and the mass of parts which cover these organs. To ascertain their existence we should attend to the directions and the depth of the wound; to whether the patient passes blood by the urethra, or bloody urine; to retention produced by collections of blood in the bladder, or clots stopping up the urethra; to whether he has a fixed pain in the lumbar region, extending to the groin and testicle of the same side with retraction of the latter. But the symptoms vary much according to the part of the kidney which is wounded, and as the lesion of the other

organs is more or less severe. If none of the large vessels are opened, and the other viscera are not severely injured, the patient has merely a discharge of blood, or bloody urine by the urethra, and the wound, as M. Boyer has had occasion to observe, generally heals in ten or twelve days. More generally, however, the symptoms, even in cases which get well, are much more severe, the patient ordinarily continuing to have discharge of pus from the bladder for a long time. Haller mentions the case of a young medical student who had a sword plunged into the lumbar region by one of his companions: he experienced little pain in the part though he at first passed much blood with his urine, and afterwards pus for three months. Haller attributes the cure to the strict diet which this young student followed, he having taken little besides barley water for three months. In the 42 Vol. of the *Jour. de Méd.* there is the case of a bayonet wound of the right kidney which terminated happily on the 24th day, although the patient at first experienced a lively pain, and general tension of the abdomen; and on the second day passed two plates full of arterial blood by the urethra. On the third day, also, there was alarming hemorrhage from the wound; and on the following days there was frequent retention of urine, caused by clots of blood and pain at the epigastrium; but after the 12th day all the bad symptoms disappeared. Repeated bleeding, rigorous diet, and injections, were the curative means employed. La Motte furnishes us with a case of wound of the kidney, which terminated happily. This wound was made with a large sword, which was plunged into the loins at the right side, and came out at the left, considerably more forward than where it entered. The patient at first lost much blood by the wounds, and afterwards by the urethra; after the eighth day, healthy suppuration was established, and the patient was cured in six weeks.

M. Boyer observes, that almost all the cases which are recorded of wounds of the kidney getting well, were from behind; and, indeed, if we attend to the important parts immediately in front of the kidney, we at once see that they ought to be infinitely more severe. If the renal arteries are wounded, and, at the same time the peritoneum, we have interior hemorrhage, which is almost always mortal.

Laubius mentions the case of a sailor, who was struck under the last false ribs of the left side with a large knife. The patient at first passed much blood by the urethra; violent fever vomiting, and death, speedily supervened. On inspection much blood was found in the cavity of the abdomen; the knife had traversed the spleen, and had been plunged deeply into the left

kidney. We are counselled to combat the first symptoms of these wounds by bleedings, injections, diluent drinks, &c.

IDIOPATHIC INFLAMMATION of the kidneys is generally occasioned by blows on the lumbar region; prolonged and rapid journeys on horseback, especially in hot weather; and in the use of powerful diuretics, such as the turpentines and cantharides. To these M. Boyer, in compliance with the doctrines of the French schools, adds, repercussion of gout, rheumatism, skin diseases, and suppression of hemorrhoidal and other habitual evacuations. This, like all the other acute internal inflammation, is accompanied by fever, which sometimes precedes, sometimes succeeds a deep pain in the region of one or both kidneys. This pain is at first obtuse, and tensive; but it afterwards becomes acute and darting, and is accompanied by a sensation of burning heat. It is less poignant, however, than in the nephritis depending on calculus, and does not extend in so distinct a manner along the ureters towards the groins; it is not ordinarily accompanied with retraction of the testicle, or numbness of the thigh, nor do the movements of the body increase it to the same degree as in lumbago, and other rheumatismal affection of the muscles of the pelvis. The urine is commonly changed to a deep red colour, and is rendered frequently, and in small quantities at a time. When the inflammation is very violent, it is clear and limpid; and when the disease extends to both kidneys, it is sometimes entirely suppressed; but, according to Fred. Hoffman, it is very rare that both kidneys are thus affected simultaneously. The pulse is at first full and vibratory, but, as the spasm and pain advance, it becomes concentrated, feeble, hard, and intermittent.

We are to attempt to procure resolutions of this inflammation by the usual means, especially bleeding, which often requires to be repeated four or five times in the course of the first twenty-four hours. Our readers must have observed that the French surgeons employ the lancet with more freedom than the physicians; but yet, so far as we know, their notions with regard to the effects of this remedy are limited and unscientific. It seems to us that the medical men in France have the vulgar notion with regard to bleeding, that it merely diminishes the quantity of circulating fluids; hence, we so seldom hear them talk of bleeding till fainting is produced, or some decided abatement of the symptoms; they make a small bleeding now, and another again; they seem never to have dreamed that it is possible, by one bold and free bleeding, to arrest almost all the acute inflammation in the very threshold, and that at a much less expense of the forces of the patient, than when the disease

is allowed to run on, or some faint attempts made to arrest its course by insufficient bleedings. After these bleedings, leeches to the anus are, as usual, recommended. M. Boyer speaks in favourable terms of deep scarifications upon the loins, and the abstraction of blood by the cupping-glasses—a mode of local treatment which we should think applies admirably to the disease in question, as blisters are in a manner proscribed in all inflammations of the urinary passages. The French practitioners insist much more upon a rigorous diet than we do; upon this head, we think it would be well, that we imitated their example somewhat more. The patient should avoid as much as possible the heat of the bed, and reposing on the back. In fine, when it is judged that the resolution of the disease is well advanced, we are to have recourse to such laxatives as promote plentiful evacuations, without causing irritation.

The termination of nephritis by gangrene is rare, but it is observed to be constantly mortal. It is announced by sudden remission of the fever and pain, extreme prostration of the forces, frequent intermittent pulse, hiccup, delirium, cold sweats, continued vomiting, total suppression of the urine, or the excretion of black putrid urine, mixed with small portions of livid flesh. There are few examples of the termination of nephritis by gangrene recorded. Fabricius Hildanus tells us, that his eldest son died at the age of seven years of this disease. After having had headache for two days, this child was seized with pain in the loins, with fever, and suppression of urine. All the means employed failed to procure the flow of the urine, and the patient died on the seventh day. Glandorff, a celebrated surgeon of the time, inspected the body, "and there was found," says Fabricius, "the kidneys and surrounding parts, struck with a strong and remarkable inflammation, degenerated into gangrene." In a gouty patient, aged 62, mentioned by Chopart, death took place on the ninth day from the translation of the gout to the kidneys. This patient had fever, and acute pains in the loins; the urine was scalding, red, and scanty; and was suppressed on the fifth day of the disease. On inspection, the bladder was found thickened, and empty; the kidneys enlarged, red, livid, covered with black spots, and easily torn.

When the inflammatory symptoms are intense, and persist in their intensity after the seventh day, there is reason to fear that ABSCESS will form in the kidney. Diminution of the fever, pulsative pains, and irregular chills, indicate the formation of pus here, as in other parts; but the symptoms are often complicated with affections of the liver, spleen, &c., which renders

the diagnosis obscure. Matter sometimes forms in the kidneys slowly and insidiously, especially in those who labour under renal calculi, hardly giving even to the most experienced the symptoms necessary to detect its presence. The abscess may exist in the parenchyma of the kidney, and may burst into the calices and pelvis, and the matter be thus discharged by the urinary passages. More ordinarily, however, the inflammation affects at the same time the tunica propria, and the adipose substance which covers it, so that the matter occasionally finds its way into the corresponding part of the colon, but more frequently accumulates in the cellular substance in which the kidney is imbedded, forming a tumour between the muscles and the peritoneum, extending into the lumbar region, and sometimes forward upon the sides of the abdomen. It is not always easy to detect matter in this situation, as the thickness of the abdominal walls prevents it from forming any evident tumour, and gives it a direction towards the vertebral column and pelvis, where it is hardly possible to distinguish it, except in very few cases, by laying the patient on his side, and compressing the abdominal walls in different directions, so as to collect the pus more into one spot. When the abscess takes the direction of the loins, we have often distinct tumour and fluctuation, though sometimes the only exterior signs are œdema, and matting of the integument. When, however, together with the general symptom of the intense inflammation terminating in abscess, the patient has a feeling of weight in the affected part, when he reposes on the opposite side, slow irregular fever, consumption, deep-seated pain, and the matting of which we have spoken, there can be little doubt of the existence of abscess of its seat; and as little, that it ought to be early opened. When the fluctuation is distinct, and the abscess not very deep, it should be opened with a bistoury; but when the only external signs are œdema, and matting of the integuments, we ought to employ the caustic potass.

When the abscess bursts into the urinary passages, it generally degenerates into an ulcer exceedingly obstinate to cure, and which is attended by a discharge of a greyish, serous, fœtid, and sanguinolent pus, or whitish, viscid, thick, and mixed with concreted lymph, in the form of pellicles or filaments, and with small portions of flesh. These ulcers are frequently the consequence of calculi: they are rarely susceptible of cure, the patients generally falling into a state of marasmus, and slow fever. In such cases, M. Boyer prohibits the use of the balsams, such as the turpentine and copivy, recommended by some with a view of deterging, and scicatrising the ulcers, contenting

himself with advising the use of diluent and mucilaginous drinks, and good diet. If the disease has persisted long, we usually find, on inspecting the body, the substance of the kidney destroyed, and the organ reduced to a kind of pouch filled with pus, or with a mixture of pus and urine.

The kidney is frequently the seat of different sorts of TUMOURS, which are sometimes of an almost incredible size. A man, aged 45, played violently at tennis, which brought on hemorrhage from the kidneys, which renewed itself always when he made any extraordinary movements, and severe pains, which continued to the end of his life. Thirteen years before his death, his belly began to swell, and the tumour went on increasing in bulk, even till his death, which took place in his sixty-sixth year. On inspection, an immense tumour was found occupying the belly, and concealing the whole of the viscera, except a portion of the colon, which passed across it like a shoulder-belt. It had elevated the sternum and ribs of the left side, and pushed towards the right side the intestines and spleen, the latter being found imbedded upon the vertebral column. On cutting into the tumour, there issued different sorts of matters; some were yellowish, mixed with minute glandular looking bodies, and with rough calculi, some as large as the end of the thumb; some were thicker, more viscid, of a greenish brown, like the lees of olive oil; others whitish, and of the consistence of honey, or melted glue. At its back part, it contained six pounds of coagulated blood. This tumour weighed 68 pounds, independent of the fluids it contained; it was oval, and its greatest circumference measured 4 feet 8 inches, its least, 3 feet 10. The ureter arose from its superior part, and was directed along the vertebra towards the bladder. The renal artery and vein were greatly enlarged. The right kidney was sound.

A soldier, mentioned by Chopart, in his inestimable work on diseases of the urinary passages, passed frequently pure blood by the urethra, and had for a long time in the left side of the belly, a tumour, which extended equally towards the umbilicus and the groin. It was oval, hard, indolent, and was thought at first to have developed itself in the cellular substance of the peritoneum. By bleeding and leeches to the anus, the discharge of blood by the urethra was arrested. The pains in the tumour having become pulsative, it was imagined that matter was forming, and the usual means to promote this event were employed; however, the tumour continued to augment; the pains became more severe; numbness of all the members, and paralysis of the left lower extremity followed; finally,

incontinence of urine, spitting of pus, passing pus with the urine, and death. This tumour was found to be the left kidney enlarged to ten times its natural bulk: it weighed eight pounds and a half, and preserved its natural form. It was presented to the Royal Academy of surgery. It contained many collections of matter of the colour of wine lees. These collections were separated from one another by cellular partitions; and enveloped in the common membrane of the kidney, which had become thickened.

Another very minutely detailed case of tumour in the kidney is given us, which occurred in the practice of Professor Corvisart, at la Charité. The tumour extended from the right hypochondrium into the left iliac region; it was curved, the concavity looking upwards and the convexity downwards; it seemed formed of many lesser tumours, two of which, the upper and the lower were remarkable; inasmuch as the first extended from beneath the false ribs, occupied the region of the kidney, and was lost towards the umbilicus in the rest of the tumour, while the second, which was exceedingly hard, was situated in the left iliac region. The first was soft and offered some degree of fluctuation. This patient, when a boy, had been struck with a stick upon the right kidney, and he had ever after been subject to pains in the part which were aggravated by fatigue. At the age of 42 he fell upon the same side which aggravated the complaints. When admitted into the hospital, the pains in the tumour were accute and darting. Corvisart announced to the students, that the tumour was formed by the right kidney; and mentioned the case of a man whose kidneys were the seat of a serous and lymphatic collection, and on whom puncture of the kidney was practised. Believing, however, that the disorganization was too extensive to admit of relief by any means, he contented himself with prescribing some simple medicines, and the patient died two months after admission. On inspection this tumour was found to have pushed the liver, stomach, and part of the intestine upwards, while the rest of the intestinal canal was below and behind it. Its inferior extremity rested in the left iliac fossa, and filled up almost entirely the entrance of the pelvis. The arch of the colon passed across its fore part. On separating the viscera, it was ascertained to be the right kidney enlarged to forty times its natural size, though still preserving its original form. On cutting into it, seven pints of turbid fluid escaped, and mixed with white flakes, little thickened mucus: this fluid was found to contain much albumen. The interior of the tumour was found composed of cells, which communicated with a common sac, occupying the place of the *sinus* of the kidney:

these cells became progressively smaller as they were situated lower down in the tumour, and in the one which occupied the place of the pelvis were four calculi, of the size of nuts, black and polished; but this colour depended only upon a thin coating of dark matter, with which they were as if varnished, and which subsequently dried and fell off in scales, leaving the calculus of a yellowish brown. The ureter ended at the same cell, but its internal mouth could not be discovered. The entire tumour was covered externally by the peritoneum, at its fore, and in a great part of its posterior part. The cyst internally was lined by a reddish membrane, soft, beset with little glandular bodies, covered with viscosities, and which was supposed to be the same mucous membrane, which in the natural state lines the pelvis and calices. Between these two was found cellular tissue, in some parts abundant, in others rare. The ureter arose from the inferior and internal parts of the tumour; it was dilated to about eighteen lines in diameter: a probe could not be passed into it from the tumour, and the spot where it terminated at the bladder was occupied by a schirrous, rough tubercle, so as to shut up the opening at this extremity. Internally it was covered with a mucous membrane, a little inflamed. The renal vessels did not appear materially enlarged. The aorta, though pressed upon anteriorly by the tumour, was sound. The walls of the bladder were somewhat thickened. The left kidney was sound, though its ureter was enlarged to about six lines in diameter. (*Journal de Méd. par* M.M. CORVISART, LEROUX & BOYER, V. 7, p. 387.)

Another patient aged 49, treated by Corvisart, in la Charité, had a swelling in the left hypochondra: after experiencing a variety of symptoms and treatment, he died at the end of a month, partly apoplectic. The kidneys were as large as the head of a new born child, and globular; the right extending into the epigastrium, behind the stomach, descended below the superior part of the cæcum; the left extended behind the spleen to the diaphragm, and downwards into the iliac region. They consisted of a mass of vesicles, varying in size, from a pigeon's egg, to fine grains. Some were thin, of the silvery grey colour of aponeurosis, and contained a fluid slightly citrine coloured; others thick, less transparent, contained a brown fluid; others again were quite opake, white, and contained a sort of thin bad pus. All, when opened, offered internally the bright polish of the serous membranes, with a slight reddish injection. They occupied the whole substance of the kidney, without communicating with one another, and externally they were covered by the tunica propria, which was entire. The termination of the

tubular substance and papillæ could no longer be recognized, but the remains of the calices were found, and the pelvis in a natural state; the ureters and bladder were also sound, as also the emulgent vessel, till they reached the tumour.—(*same Journal*, p. 399).

Ballonius relates that the left kidney of a widow, who died of nephritis, was as large as that of an ox, and contained a little sanies and a small stone. During life it formed a hard tumour in the hypochondrium, which had been mistaken for the spleen in a state of induration. The right kidney was so small that it was with difficulty discovered.

M. Boyer quotes an exceedingly interesting case from the history of the Royal Society of Medicine of Paris. A woman had a tumour in the right side of her belly, which was thought to be engorgement of the mesentery. After death, however, it was found to be the right kidney forming a soft membranous mass, eight inches long, and five thick. It contained much serum, and four pretty large calculi; and was composed of numerous membranous cells, which opened into one another. To discover the left kidney it was necessary to follow the ureter, which conducted to a small membranous sac under the diaphragm, which contained some cells a little thicker than those of the right kidney; in which was contained a little turbid serum, and a calculus as large as a pea. It was impossible to distinguish the difference of the substances in the two kidneys. We must not think of quoting more of the instructive cases brought together under the head of tumours of the kidneys, nor, indeed, of the general reflections which M. Boyer hazards upon this highly interesting subject.

Renal Calculi have been observed to form readily in fat individuals, who eat much, and who lie long in bed in a state of health; or, who are compelled to lie long on their back in consequence of such diseases as paralysis, or fractures of the lower limbs. Most of our readers will recall the case mentioned by Van Swreten, of a man who never had experienced any symptoms of stone, but who was attacked with a calculous nephritis, after having lain two months and a half on his back, without changing his position, for a cure of a fracture of the thigh. After suffering severe pains, he passed a small rough calculus by the urethra. It is well known that Sydenham, during confinement for the gout, became subject to calculi. The small rough stones which are moveable in the calices and pelvis irritate these organs, and cause the most lively pains, while those which are large and immoveable, dilate the cavities of the kidneys, alter their organi-

zation, destroy their parenchymatous structure, and convert them into cells, containing turbid purulent urine and calculi. But what is very remarkable the kidneys have been found thus destroyed in individuals who never experienced pain, nor passed gravel, pus, or blood in their urine. Bonnet relates that at the inspection of the body of a prince, the right kidney was found as large as a child's head, and contained a stone of three inches and a half in diameter; a large and deep abscess filled with yellow fœtid pus was found under the psoas muscle; and the left kidney which was enlarged, contained at least one hundred small calculi. During life this person was never known to complain of nephritic pains, to pass gravel, or to have difficulty in voiding his urine.

The symptoms of stone in the kidney are often obscure. Galen tells us, that having felt an acute pain in the track of one of the ureters, he believed that he had got calculus in the kidneys; but the pain having totally disappeared after an injection of the oil of rue, he abandoned this opinion. Boerhaave committed a like mistake, in attributing the pains of a lumbago to stone in the kidney. Other affections of the neighbouring parts also lead to confusion in the diagnosis of the complaint. Schirrus, abscess, and stones in the pancreas or mesentery, schirrus and displacement of the spleen, tumours in the intestines &c., have been mistaken for nephritis, arising from calculi. Hysteria also often stimulates this disease, presenting pain in the same seat and track, accompanied by suppression of urine, nausea, and bilious vomiting. To prevent mistakes on this head, we ought, according to M. Boyer, to inform ourselves whether the parents of the person were subject to calculi, whether gravel or small calculi passes by the urethra; if the invasion of the pain and the other symptoms has occurred after a severe exercise or a violent shake, and if the urine rendered is red, sanguinolent, or like a decoction of coffee.

The symptoms of calculous nephritis usually come in fits of variable duration, sometimes persisting a few hours only, at others for several days. The urine generally more or less suppressed during the accessions; during the remissions it again flows, but is coloured, muddy, glairy, or gravelly. If the symptoms persist long, inflammation is the inevitable consequence, which if it does not yield to the proper remedies, ends in suppuration and ulceration of the kidney. The patient has then irregular fever, successive heats and chills; his urine is troubled, scalding, and loaded with pus and mucus. It has been observed that if, in such a case the urine becomes clear and limpid, these pains, feeling of weight in the loins, and

other symptoms are redoubled until the discharge of the pus be re-established.

Renal calculi are always most troublesome in people advanced in years, because the gravel is apter to be retarded in the renal cavities, and to increase rapidly in consequence of the great superabundance of uric acid in the urine of old people. They are also more dangerous in sanguineous, bilious, melancholy, and very irritable individuals, than in others. The danger is still greater when the accesssions are intense and return at short intervals. Indeed, when there is passing of blood and pus in the urine, with slow fever, it is seldom that the disease fails ultimately to end fatally, though the sufferings of the patient are ordinarily protracted through a long period.

At the first accession of a calculous nephritis, we are recommended to bleed freely, and employ scarifications, or leeches over the region of the affected kidney, to prescribe diluent and mucilaginous drinks, such as decoction of linseed, with nitre dissolved in it; with baths and embrocations. M. Boyer speaks highly of a liniment composed of an ounce of almond oil, half an ounce of laudanum of Rosseau, and half an ounce of althæa ointment, rubbed over the loins, repeated every two or three hours, and the parts afterwards covered with two or three folds of flannel, dipped in a decoction of poppy heads. After the bowels are evacuated, emollient injections retained in the intestines are found to be useful. M. Boyer prohibits all active diuretics and purgatives during the accession. If suppuration takes place, however, we are to determine the pus towards the urinary passages, by means of active diuretics, taken in large doses. For ourselves, we are totally at a loss to perceive the utility of this treatment, for if the abscess has any communication with any part of the urinary passages, the pus will make its way into the bladder, independent of the irritation of active diuretics, and if it does not communicate with these passages we are at a loss to perceive upon what principle M. Boyer thinks that diuretics will establish this communication. Ulcers, as we have said, usually succeed to abscess, and are said by Boyer to be next to incurable; but in complication with these ulcers, we have also sometimes abscess forming in the region of the loins or ileum. When the purulent matter is confined within the pelvis or calices of the kidney, it never produces evident tumour externally; but what occurs most ordinarily, is that the inflammation excited by rough, unequal stone, extends even to the surrounding cellular tissue, in which the kidney is imbedded, produces suppuration there, disorganizes the already inflamed and ulcerated kidney, so that the stone comes to be

lodged in the midst of an abscess, which forms between the peritoneum and abdominal muscles, and sometimes presents a tumour in the region of the loins, in which fluctuation is felt, and which, according to Boyer, and indeed, all experienced surgeons, ought to be opened, and the stone and matter evacuated. It has been proposed to cut into the kidney, and extract calculi, if, even when no abscess had formed, the symptoms of their pressure were quite certain; but the difficulties and risk of such an operation are so manifest, that no man of ordinary sense and humanity will readily undertake it.

There are some examples recorded of abscesses of the kidney bursting spontaneously, and the calculi being thus discharged; but these cases ought not to deter us from opening such abscesses as soon as we are certain of fluctuation, as the prolonged lodgment of the matter only augments the disorganization of the kidney, and is apt to form intractable sinuses in the surrounding part. When the accumulation of pus and urine is confined to the substance of the kidney the practice is doubtful, and the existence of the abscess seems difficult to determine. One of the principal signs is a doughy or œdeatous feel of the integuments, but it is by the comminative and rational symptoms chiefly that the surgeon is to judge; but we presume to think, that it will be rare indeed, that any thing like certainty can be attained on this head; and even though the surgeon is certain of this deep-seated abscess, we think it would be a better practice, unless the symptoms were very urgent indeed, to attempt to bring the matter nearer to the surface before making any attempt at opening the abscess.

To prevent the formation of renal calculi, M. Boyer recommends the daily use of mild diuretic drinks, mixed with a very small quantity of white wine, which usually renders the urine clear, and almost aqueous. It has been observed, that if those persons whose urine deposits a great quantity of very fine red sand, take 20 or 30 grains of calcined magnesia, on going to bed, that the urine in the morning will be much more clear and limpid. But the use of the magnesia must be continued perseveringly to have any lasting effect.

The presence of WORMS in the kidneys of several animals, and among others, man, is a fact which has been repeatedly observed. Dogs, however, seem to be more subject to them than any other animals. Morgagni tells us, that Valsalva, enamoured with the study of anatomy, dissected a dog, in which he found a body resembling a kidney exteriorly, but which contained under its external membrane a thin glandular shell, under which was a cavity, lined with a smooth mem-

brane. In this cavity was a worm, three ells long, and larger than an ordinary writing pen. Blasius found in the kidney of a very meagre old man, two worms of the length of a cubit, reddish, distended with watery fluid, and which seemed formed of a number of rings jointed together. Lusitanus mentions his having seen in a military hospital in Spain, a robust young man, who was subject from infancy to severe pain in the kidneys, and who died in a state of marasmus. The body was inspected in the presence of many physicians, and some living worms were found in the kidneys, of a light green colour, and half the length of the index finger. As to the numerous instances recorded of worms issuing by the urethra, Morgagni observes, that most of them were mere polypus concretions, and that others were not produced in the urinary organs, but had got thither by perforating the intestines. Thus, James Spon mentions the case of a merchant of Lyons, who, after the ordinary symptoms of a nephritis, passed a large quantity of bloody urine, at the bottom of which was found a body a foot long, which was at first mistaken for a worm, but which a more attentive examination discovered to be altogether similar to the polypi, which form in the cavities of the heart. Kellner also gives the history of a man, who, after acute pains in the loins, extending to the pubis, and violent tenesmus of the bladder and rectum, passed a body, which was at first taken for a lumbricus, but on a more minute search, Kellner found that it was nothing else than coagulated blood, contained in a kind of thin tunic.

A very curious case is recorded by a M. Moublet, in the *Medical Journal* of Paris, Vol. IX. A child had an abscess in the right lumbar region, which was opened, and much pus, mixed with blood, was discharged. The discharge continued abundant for twelve days, and after a considerable lapse of time, the wound healed. Some months after, however, the cicatrix became soft, swelled, and fungous, with pain and tension in the neighbouring parts. The urine became suppressed, and the child fell into convulsions. The cicatrix was laid open, and a new flow of pus took place, after which the symptoms disappeared. The opening became ulcerous, and after a time again closed, and again required to be opened, when it remained fistulous. In fine, the child's mother one day examining the fistula, perceived a living worm in it, which she drew out, and preserved to shew to the surgeon. This worm lived afterwards three years. The surgeon the same day extracted another, also alive, which was four inches long, and the size of a goose's quill. Two days after, the child could not pass his water, and

the bladder was tense. M. Moublet attempted to introduce a catheter without success; he injected some tepid oil into the urethra, with a view to facilitate the issue of the gravel, which he suspected intercepted the passage of the urine, and put the child into the warm bath. On again attempting the sound, he perceived a foreign body at the extremity of the urethra, which he seized with a pair of forceps. He found it to be a worm, in life, of the length and figure of those which had been withdrawn from the fistula. On the following night, the child passed another, after which the urine flowed easily, and the child got completely well. M. Boyer believes that these worms were lumbrici, and were engendered in the intestines; and that the fistula by which these two first were discharged, did not communicate with the kidney.

Two species of RENAL HYDATIDS have been recognized by authors, the first known by the name *ageticus hydatiformis*, is nothing else than a serous cyst, situated usually in the thickness of the tunica propria of the kidneys; the other consists in lymphatic vesicles, single or in clusters, free in their circumference, and which are regarded as being actually animated.

The first are met with very often in old people; they are thin and transparent, and contain usually a colourless fluid, though in some cases given by Morgagni, it was reddish, and had a urinous smell. Often they increase so much, and press so much upon the substance of the kidney as to destroy it; and when this takes place in both kidneys, the patient almost always perishes with an ascites.

The live hydatids are said to be met with in the mamiferous animals only; sometimes they are found in the substance of the different organs, upon its surface, or under its proper membrane, in the interstices of the muscles; but they are never found floating freely in the intestines, or any other natural cavity, being always enclosed in cysts, which separate them completely from the substance of the organ which contains them. Sometimes these cysts are simply membranous pouches, and contain the hydatids in greater or less numbers: contained in great numbers in one cyst, is the state they are usually met with in man. The cysts may acquire an enormous volume, and be quite gorged with hydatids, or they may float freely in the liquid which the cyst contains. When very closely heaped together, they generally destroy or decompose one another, and then it is impossible to ascertain their primitive organization; whence, probably, have arisen the numerous doubts with regard to the vitality of these animals.

Hydatids are rarely met with in the kidneys; sometimes

they are found adhering to the internal membrane of the calices, pelvis, or ureters, where, as they augment in bulk, they are detached, and are expelled with the urine, some in an entire state, others broken, and presenting nothing but the remains of a vesicular bag. When too large to pass along the urinary passages, they accumulate in the pelvis and calices; dilate and change in some sort the organization of the kidney, its parenchyma being compressed, thinned, or even totally destroyed, so that what remains of this organ is a mere cyst, filled with urine and hydatids. Such a degree of disorganization cannot occur without giving rise to nephritic pains, retention or difficulty to pass urine, and the other symptoms which characterize calculous nephritis; at the same time, it is impossible to pronounce any certain diagnostic, unless hydatids have passed by the urethra. M. Baumes recommends anthelmintics and mercury against hydatids; but according to M. Boyer, we can do little in this complaint, unless we instigate the symptoms by warm baths, mild diuretic drinks, and so forth; cases of cure of persons who were known to have hydatids in the kidneys, are extremely rare.

The URETERS are subject to stricture, dilatation, spasm, inflammation, and calculi. If the urine passes not at all, or but in small quantity along the ureters, they become spontaneously constructed like all the other excretory ducts. When a stone also gets engaged at their origin, so as to intercept the course of the urine, we have the same result, in all the parts between the stone and the bladder, while the part above is preternaturally dilated. Meckel records the case of a woman in whom the kidney was found changed into a small fleshy mass, in which the tubular part was altogether wanting, and the ureter was converted into a solid membranous cord, without any cavity. The right kidney was double its renal size, and contained fourteen calculi, the largest of which occupied the pelvis. In a woman, inspected by Morgagni, one of the kidneys was wasted, but its pelvis enlarged; the other kidney was enlarged; its pelvis, also, was more capacious than ordinary, but the ureter was so much constricted, that air was with difficulty blown through it.

Stricture of the ureters may result from acute inflammation, or from the callous thickening of their walls, which chronic inflammation sometimes occasions. Schirrus of the rectum, also of the uterus or ovaries; excessive distention of the largest intestines; the gravid uterus; in short, any cause which may exercise permanent pressure upon the ureters produces their constriction, and consequent retention of the urine in the cavities

of the kidney. Obliteration is sometimes a fault of conformation. In a fœtus mentioned by M. Boyer, which died during labour at the full time, the ureters from the bladder, to within an inch of the kidneys were hollow cavities as usual, and about a line and half in diameter, but the remaining inch formed an impervious cord, not thicker than the fourth of a line. The kidneys were larger than ordinary, and on removing the tunica propria, the substance of the kidneys was found in great part composed of membranous vesicles of different sizes, round and oval, and filled with a thick watery fluid, possessing a urinous odour.

Excessive dilatation of the ureters is almost uniformly the consequence of obstruction by means of calculi, pus, clots of blood, hydatids, &c., to the passage of the urine from the ureters into the bladder. Stricture of the inferior part of the ureters causes accumulation of urine, and consequent dilatation of the portion between the stricture and kidney. Thus, Chopart relates the case of an individual, in whom the vesical openings of the ureters were strictured, while the rest of their extent was as large as the finger; the bladder was empty and thickened, and the calices and pelvis much dilated by the urine which they contained. According to Petit, if the obstacle to the course of the urine exist at the neck of the bladder, or in the urethra, all the urinary passages are successively dilated; the valvular construction of the termination of the ureters resisting only to a certain point. In an old woman who died with the urinary organs thus gorged, Morgagni pushed air into the bladder, which escaped by an incision made into the pelvis of one of the kidneys. In some cases the orifices by which the ureters terminate in the bladder, are excessively dilated. In Chopart's work we find the case of a lad, aged 19, who had stone in the bladder, and who complained of great difficulty in making water. Pelletan introduced a catheter, but without feeling any stone; he had great difficulty in moving the instrument in the bladder. There issued only about half a glassful for 24 hours. The same day, at mid-day, another surgeon introduced the catheter, and a pint of clear urine was withdrawn. The patient died, and some dispute arose as to the cause of the difficulty which M. Pelletan had experienced in moving the instrument in the bladder. M. Pelletan thought that the instrument had been engaged in the orifice of one of the ureters; others *charitably* supposed that he had made a false passage. On inspection the bladder was found large, although it contained almost no urine; its walls were nearly an inch thick, and a calculus, as large as a hen's egg, was found lodged near its neck. The orifices of the ureters

were so much dilated, that they received the end of the finger with ease. In another case, from the same work, Pelletan says that, having introduced the sound, for the purpose of performing lithotomy upon a child in whom the presence of a stone had been previously established beyond doubt, he was unable to feel any foreign body, although he used every contrivance for that purpose. After some days he proposed again to sound the child, but this was obstinately refused. After some time the child died, and, on inspection, the stone was distinctly felt across the thickened walls of the bladder. M. Pelletan then introduced the sound, and having raised the intestines, he found that it had passed into the right ureter, which, as well as the left, was more than an inch in diameter. On cutting open the bladder, the orifices of the ureters were found so large as to admit the little finger. The stone was of immense size. In those cases where the presence of a calculus has been ascertained, and where we fail to strike it in consequence of the instrument passing into the dilated orifice of one of the ureters, M. Boyer advises us to employ a sound very much curved, and of which the beak is somewhat elongated, and to carry it forward directly in the middle line of the abdomen, with the handle a little depressed upon the thighs.

The dilatation of the ureters is sometimes carried the length of forming a tumour externally. Dèsgrange reports the case of a lady, who, some years after labour, became dropsical, with dull, gravitating pain in the left iliac region. After some time, a slight circumscribed swelling was perceived there, in which there was obscure fluctuation. This was thought to be dropsy of the left ovary. Sometimes the humour disappeared, or became much less; at others it increased greatly. The patient complained of occasional difficulty in passing water, and ultimately died. On inspection, the left ureter was found forming a tumour, which extended along the psoas muscle, from the sacro-iliac symphyses to nearly as high as the kidney. On compressing this tumour, a little stringy part of the fluid which it contained, flowed into the bladder. Its walls were thick, reddish externally, and of a membranous texture, and lined by a smooth membrane within. At the point where the ureter bends a little outwards to pass into the pelvis, the ureter became of the natural size, and at this place presented a circular fold of its internal membrane, which performed, in some degree, the office of a valve. The orifice by which the ureter terminates in the bladder was either not examined, or no morbid appearance was observed.

These tumours may be mistaken for chronic abscess, but if

by pressure we can employ them, and the desire to void urine follows, we may be pretty sure of their nature. The other symptoms of a urinary affection ought at the same time to be taken into account. A man, aged 45, was admitted into la Charité, for a contusion of the thigh. He had the left testicle indurated, but he never had experienced difficulty in voiding the urine, or pain in the region of the kidneys. On examining the left iliac region a tumour was felt, which was painful on pressure, and habitually accompanied with a dull pain. M. Boyer, believing that it was engorgement of the cellular tissue which surrounds the spermatic vessels, applied emollients, and it augmented insensibly, so as at the end of three months to elevate considerably the abdominal parietes. Laterally, it extended from the last false ribs to below the crest of the ilium; it was of an oblong form, and larger superiorly than inferiorly, and evidently contained a fluid. As the patient had never experienced any symptom of a urinary affection, M. Boyer was led to believe it to be a chronic abscess, and accordingly he opened it, and gave issue to three pounds of a citrine coloured liquid, which was ascertained by analysis to be urine. The puncture healed in 24 hours, and at the end of 15 days the tumour was as large as before. A second puncture was made with the same results, except that the wound degenerated into a fistula, by which the urine continued to flow. After three months the patient died, and the fistula was recognised to communicate with the ureter, which was enormously dilated, and its walls at least three times in thickness. The enlargement was greatest towards the kidney, and went on diminishing towards the bladder where the ureter became ligamentary, and structured so as to admit with difficulty the point of a very fine probe. These affections are regarded by M. Boyer as incurable, and opening the tumours he thinks can only accelerate the death of the patient.

Stones are rarely formed in the ureters; M. Boyer believes never, unless some foreign bodies have accidentally got there, as was the case with a soldier who died in the hospital at Lille. This patient had fever, tension of the stomach, and acute pain in the right side of the epigastric region, where an inflammatory fluctuating tumour at last appeared, which being judged to be an abscess was opened, and pus of a bad odour followed by urine flowed out. The urine continued for a long time to flow by the opening: the patient died, and on inspection the epiploon was found destroyed, the right ureter ulcerated, filled with pus, and containing a pin incrusted over with calculous matter.—When the renal calculi are large or pointed, they pass with difficulty along the ureters, produce intolerable pains, and sometimes even

are arrested there. Le Dran found on opening the body of a woman the ureter so much dilated as to contain about three ounces of sand and small calculi, through which the urine filtered. A single calculus is sometimes found at the superior part of the ureter. Tulpius gives us the drawing of a large oval calculus which he removed from the pelvis of the left kidney of a woman aged 40, the pointed extremity of which projected into the superior extremity of the ureter, and completely intercepted the passage of the urine. But the part of the ureter where calculi are more usually arrested is at the oblique part, where it traverses the coats of the bladder, and here the stone sometimes projects into the bladder, so as to be felt by the sound. Calculi, even as large as small nuts, often make their way from the kidney into the bladder in a very short time, and without producing much pain, fever, or ischuria. Ordinarily, however, if the stone is large or pointed, there is severe pain extending to all the urinary organs, and the thigh of the affected side; retraction of the testicles, the pulse hard and frequent; the patient has spasms, even sometimes convulsions, dysuria, and stranguary. If the stone does not pass speedily into the bladder, the inflammation produces abscesses in the ureters and kidneys, ulceration, and often death.

Poilroux on Chronic and Organic Diseases *.

These new researches of M. Poilroux are compiled, in a great measure, from foreign writers, and on that account are not altogether undeserving of our attention. They are founded on a dissertation, which gained the prize from the Medical Society of Montpelier. In a long preface, the author glances at the theories and practice of preceding writers, and acknowledges himself to be a follower of Hippocrates, and an opponent of the doctrine which is at present fashionable in France, that irritation is the universal parent of disease.

Is there a well-marked distinction between acute and chronic diseases? On this subject physicians think very differently; but it is a fact, that the same disease, according to circumstan-

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* Nouvelles Recherches, sur les Maladies Chroniques, et principalement sur les affections organiques et les Maladies heréditairs; par Jacques Poilroux, M.D &c. Paris, 1823. 8vo. pp. 465.

ces, may have a rapid or a lengthened course; though still it is the same disease, and requires no change of treatment. In an acute fever, nature, says our author, does every thing, and the physician is little more than the assistant of her efforts. But in chronic diseases he has much to do, as nature for the most part is entirely passive. In the latter, the morbid cause acts gradually; it attacks textures, excites serious changes in them, and lays the foundation of organic mischief. Nature, in the mean time, is almost unconscious of the disease; and if a vital reaction ever makes its appearance, it is not till the disease is in its last stage, at which time, it is rather injurious than salutary. The difference, says M. Poilroux, between the acute and chronic disease is undeniable; for surely there is an essential difference betwixt an epidemic fever and an epilepsy. Acute diseases, depend upon active causes, which produce a sudden change in the animal economy; but the causes of chronic ailments are slow and insidious in their operation. Chronic diseases never end favourably unless there is a certain degree of febrile reaction; and such reaction is always more or less present, though the disease may appear to be removed solely by hemorrhage, or the discharge of serous fluids, or by scabby eruptions or abscesses.

The author divides chronic diseases into four classes. In the first, he includes those which approach nearest to acute diseases; and in the last, all those which are essentially different from the acute; and in the second and third classes, those which are intermediate to the above.

In the first class he comprehends all those chronic diseases which are occasioned by medical constitutions, epidemics, or influences of the atmosphere; and he has divided it into four chapters. In the first of these, he treats of inflammation of the viscera or parenchymatous texture, of mucous and serous membranes, and of the fibrous texture; and in the second he treats of bilious disorders; but in none of these have we seen any thing worthy of remark. Mucous diseases, the subject of his third chapter, have much resemblance to chronic ailments, though the fever which accompanies them generally gives them an acute form. The causes tending to induce them are a cold and moist temperature of the air, long rains, or cold and rainy seasons. Women and children are most sensible of their influence. They appear generally in low damp situations, which are frequently observed by mists or fogs. Their character is slow; and their symptoms, though apparently trivial, are very apt to assume the features of putridity or malignity. Their crises are rare and partial, and relapses are very frequent. The cellular texture, the brain, the glands, and all the organs connected with

the nutritive system, are the parts chiefly affected by them. Such was the character of the epidemic, observed in the Circle of Castellane, in the last six months of 1818. It had all the characteristic marks of the common mucous fever, and at times even showed symptoms of putridity. It attacked young persons of either sex; its progress was extremely slow; and relapses were occasioned by the slightest imprudence, and indeed frequently occurred without any apparent cause. There was great irregularity in the pulse. There was much oppression and debility, the cheeks and cellular texture were inflated, and the patients complained of wandering pains all over them. But with all this there was no symptom of gastric irregularity; but, if there happened to be diarrhœa, the head was much less affected. Sweats at certain periods were critical. When the disease was uncomplicated the most simple remedies were sufficient; but the slightest circumstance brought on putridity, and this was preceded by a black tongue, delirium, debility, involuntary stools, &c.; then blisters, sinapisms, wine, bark, arnica montana, &c. became necessary. This epidemic was not contagious: it affected the nervous, mucous, and cellular textures, and convalescence was tedious.

The mucous affections, says our author, are distinguished from the catarrhal by the debility of the membranes, and by a more abundant secretion of mucus. Both are confounded by Grimaud. Debility may be accidentally present in catarrh, but to mucous affections it is essential. Besides, the latter are generally connected with the primæ viæ, whilst catarrh, besides being more rapid in its course, attacks in preference the cavities of the nose and lungs. But the mucous fever of 1818 had no gastric symptoms; emetics produced no mucous discharge, and patients recovered well enough without them. Purgatives did harm by opposing the efforts of nature, which were always directed towards the skin. During the prevalence of these fevers, chronic complaints were met with, from the same cause; which, although without fever, required a similar treatment in the mucous fevers; and these were anasarca, dyspnœa, phthisis, and jaundice. The general treatment consisted of mild emetics, mercurial preparations, camphire, &c. The author is of opinion, that *chronicity* is a characteristic of the mucous affections, even when they are accompanied by fever.

The 4th chapter is employed on nervous diseases of the chronic kind, and of these, says M. Poilroux, spasm, or the *nervous ailment*, is, in general, a concomitant; being indeed one of the causes which produce them: consequently nervous diseases, particularly the various kinds of typhus and all epidemic fevers, though

at first acute and alarming, have a tendency to become chronic. But whatever form these nervous affections assume, the cure is the same; the principal indications being to correct the nervous state by proper remedies, to destroy spasm, and as much as possible to re-establish order and regularity in the vital motions. In 1818, the author met with a nervous epidemic that sometimes was acute and sometimes chronic. In the latter form of it there was heat in the chest and epigastrium, and the abdomen was swelled and constipated; the slightest cause agitated the patient; he was melancholy and anxious about the issue of his disease; and the mildest stimulant did harm. During night the heat was very troublesome, and the least fatigue rendered it extreme. There were flitting pains in various parts of the body; but the stomach of the patient was in no way affected. In general the disease was complicated with inflammation, which made small bleedings and cooling beverages absolutely necessary: and those in combination with relaxing and anodyne remedies were adapted both for the acute and chronic form of the disease; the last of which sometimes continued for months.

The author now enters on his second class, which comprises such chronic diseases as do not depend on medical constitutions or epidemic influences; and this class he has divided into eight chapters. In the first, he examines those chronic diseases which are the result of acute ones, and which generally depend on the debility of the patient's system, or on any debilitating cause, or on an internal inflammation passing on to suppuration. Here the treatment must be very different from that of the acute diseases, from which they spring. In internal suppuration we must favour the evacuation of pus by exciting the excretory organs, and in doing this we must give gentle shocks to the constitution, in order to favour the rupture of cysts and facilitate the evacuation of their contents; and we must apply emollients and irritants over the parts where the purulent matter is situated. Dropsy is also sometimes the result of these chronic forms.

Irregular nervous fevers, and the tedious convalescence which commonly succeed to them, are very apt to produce chronic ailments of this nature; and they are also frequently induced where gastric affections have been misunderstood or improperly treated. They are, likewise, apt to be occasioned by repelled eruptions. The author informs us, that a partial repulsion of measles, in a very healthy young man, was followed by a tedious scorbutic ulcer in one leg, alternating with mental derangement, and not cured without the use of blisters and caustic issues. Whatever be their origin, these chronic complaints preserve a decided resemblance to the acute ones from which they

spring. Indeed, acute inflammations of the severest kind may become chronic; even croup has assumed this form.

In the second chapter we have those chronic diseases which are the product of poisonous substances. Poisons generally produce acute disorders, which are quickly fatal; but if they are swallowed in small doses, or administered to persons who are not of an irritable habit, their effects are chronic. Syphilis is decidedly a chronic disorder; and the same consequence is produced by the effluvia of lead or mercury. In all these, the indication of cure is to evacuate or neutralize the poison. M. Poilroux quotes various authors on this subject; and contrasts the treatment of the Colic Pictonum, at La Charité, in Paris, with that employed by De Haen, Bordeu, and Tronchin. The first, where neither the stomach nor intestines are inflamed, and where the effluvia of lead are merely lurking in the plicæ of the bowels, consists of purgative glysters, emetics, diaphoretics, and drastic purgatives; and the second, where inflammation is actually present, comprehends oily and mucilaginous remedies.

In the next chapter the author treats of those chronic diseases which assume a periodic form, and favours us with a dissertation on intermittents. In all these, after the material cause of the disease has been evacuated or removed, cinchona may be employed with benefit; for they are generally the consequence of marsh effluvia, which occasion debility, and act like poisons on the nerves and the other vital powers. But inflammation is the product of the mineral poisons.

Chronic inflammation is the subject of the fourth chapter; and in the course of it, the author makes a distinction between chronic and latent inflammation. In the latter, pain is not felt, and in a very short time gangrene generally ensues; but in the former the disease is tedious, and the vital re-action is extremely slight, and if it does not end in resolution or suppuration, it produces hepatization or disorganization of the inflamed organ, and not gangrene. In the latent kind, even where the stomach and intestines have been inflamed, and where gangrene has ensued, the most essential symptoms, such as pain, fever, constipation, tension and hardness of the abdomen, and vomiting, were slight, or entirely wanting. In such cases, there is probably a palsy of the inflamed parts.

Chronic inflammations are generally found in those organs which act slowly, which are subject to atonic diseases, and in which a specific virus of any kind exhibits its pernicious effects. In the lungs, or other mesenteric glands, it is seen as the concomitant of scrofula; and in the liver it appears after torpor, or obstruction by biliary calculus, schirrus. The same thing happens externally.

Is not the most frequent chronic inflammation of the eye scrofulous or venereal? The nervous constitution, likewise, is more subject than any other to chronic inflammation; and infancy and old age are also more liable to its attack. But all such inflammations, whether external or internal, are occasioned, says M. Poilroux, by the scrofulous, venereal, cancerous, arthritic, or rheumatic virus. The treatment, too, is different in some respects; for Dumas never knew a chronic inflammation removed by a hemorrhage, artificial or natural. Its diagnosis is rather difficult. There is either no pain, or it is very slight; the heat is trifling; and if there is any fever, it is extremely moderate. Neither are the functions of the affected organ much injured; for it appears to be affected merely with spasm or congestion, not inflammatory. To detect it, we must attend carefully to every circumstance of the case. In the cure, we should combine gentle stimulants with our antiphlogistic remedies; but the latter should never be long persisted in, and should be local rather than general. Stimulants are the more necessary if the disease is of long standing, and if the inflamed organ has lost its power. Of course, a specific virus must be attacked by its appropriate remedies.

The fifth chapter treats of the chronic diseases of the abdominal viscera. These are numerous, and affect principally the age of manhood, and the decline of life in both sexes. Man, as well as woman, is affected by plethora at the age of fifty, which renders the circulation of the blood in the vena portæ more difficult; and in man this difficulty produces many chronic ailments. These, though not inflammatory, are nearly allied to inflammation. If this plethora is directed to the stomach, we have pain in that organ, depraved digestion, inflation of the epigastrium, and more or less frequent vomiting, sometimes followed by hæmatemosis or melæna. If it turn towards the liver, congestions are formed in it, or jaundice makes its appearance, or schirrus, and the digestive functions languish: and when the spleen is affected, we have all those symptoms which the ancients attributed to black bile. If persons of the above age become fat, they are often saved from much suffering. Evacuations of blood, which relieve the vena portæ, and mild aperients and diuretics, are the best remedies; and of the latter kind the cinchonaceous plants, and saponaceous and solvent medicines, and the visceral glysters of Kæmp, are the most valuable. Exercise and the use of mineral waters are also of great service. The author also speaks highly of the application of leeches to the anus.

In the sixth chapter, the author enters on the subject of passive hemorrhages. They are generally caused by a varicose state of the vessels in the abdomen, produced by a languid circulation, and great debility of the exhalants of the affected part. Among these we may enumerate hæmatemosis, excessive hemorrhoidal discharge, bloody urine, and immoderate flow of the menses. They are attended by the general symptoms of weakness and cachexy, and give no relief, but on the contrary aggravate the debility already present. They are often symptomatic, but generally the disease is primitive. They are best treated by tonic and astringent remedies.

The author next, in his seventh chapter, considers the diseases of the lymphatic system. All its diseases have a chronic form, and they seldom exhibit either *coction* or *crisis*, except at the time of puberty, or at certain periods when the arterial system gains the mastery, and checks the disorders of the lymphatics, and brings about their solution. Fever rarely accompanies them, and it oftener does harm than good. To this class of diseases belong rheumatism and asthenic gout; for in them the lymphatic vessels which go to the capsules of the joints, to the synovial glands, to the periosteum, and to the bone, are undoubtedly diseased. Here also may be enumerated the diseases which depend on a loss of vital properties in the lymphatic vessels, with or without the presence of a specific virus; and amongst these the diseases of the skin are included. The following are enumerated by M. Poilroux, as depending upon a diminution of vitality in the lymphatics: puffings or thickening of the cellular texture, stagnation of the lymphatic juices, cold congestion of the glandular system, general and local dropsies, greater or less cold obstruction of the bowels, abundant though simple mucous discharges, and, in short, every thing that destroys the nutritious quality of the lymph.

The usual symptoms of such diseases are a small feeble pulse; a form pale, spiritless, and puffy; eyes without expression; sluggishness, and inability of action; softness and flaccidity of the muscles, loss of appetite, indigestion accompanied by flatulence and acid eructations, mucous and glairy stools, &c. The causes are all of a debilitating nature, such as excessive evacuations, cold and damp air, a coarse vegetable diet, &c. The author next enumerates the effects that each specific virus produces on the body, and informs us that scrofula attacks the glands principally, and is thus the parent of tubercles, the harbinger of pulmonary phthisis, the most formidable of all chronic maladies. He thinks that cancer, which he calls a monster in pathology, is, in its last stage, allied to scrofula.

To cure simple glandular obstruction he uses tonics, stimulants, and solvents; and all those remedies, in short, which increase the vital powers of the lymphatics. Externally, he employs simple or aromatic frictions and blisters; and inwardly, he gives emetics and drastic purgatives, which, by the shock they give to the frame, he thinks, favour the absorption of stagnant juices. Aromatics, bitters, chalybeates, saline medicines, and exercise, particularly the latter, are of the utmost service. But we should never irritate, by friction or otherwise, a schirrous gland, lest we force it to become carcinomatous. The remedies enumerated by our author for rickets need not be mentioned; but if the disorder attack the bowels, bitter stomachics, calomel, and particularly lime-water, are most beneficial. And, at a certain age, when it is possible that inflammation may take place in the internal glands, we should join emollient and mucilaginous remedies with our stimulant ones; and when there is danger of cancer, the stimulants should not only be of the milder kind, but should be used with great circumspection. Here we may employ the extracts of soap-wort, henbane, goldwood, and male speedwell, or the two last joined with hemlock, which form the solvent of Quarin. "For gout," says M. Poilroux, "there is no specific, unless it may be found in a combination of temperance and exercise. If chronic rheumatism ever require stimulants, they must be such as act upon the skin; and experience has shown that the warm vapour and mineral water bath, kermes mineral in large doses, decoction of the woods, and bitters, are of much use in that disorder. If the pained parts were inflamed, it is likely that those remedies would be hurtful. Nearly the same treatment is beneficial in diseases of the skin."

All the remedies we have mentioned for the cure of lymphatic disorders, act nearly in the same manner. They increase the energy of the arterial system, and produce a kind of fever, which is salutary. The age of puberty, however, will sometimes do spontaneously what all our remedies fail to effect, and will remove scrofula, rickets, tinea capitis, &c. In these disorders, a thousand observations have proved the good effects of an accidental fever; and in this way, Lalouette has seen very old scrofulous tumours dissipated, old ulcers cicatrized, and caries of a bone healed, after a truly critical discharge by stool, perspiration, or urine. Even the venereal disease will yield to accidental febrile action, and that too when mercury has completely failed.

In his eighth chapter, the author examines the diseases of the nervous system. There every thing almost is in darkness and mystery, which neither anatomical nor practical researches have

been able to remove. These diseases are characterized by great mobility of the nerves, but which does not depend on organized disorder, or on diseased textures. The slightest cause irritates the nerves, and disturbs the functions of the body; but as these phenomena are easily excited, so are they easily allayed. Hence convulsions excited in a woman of luxurious habits and irritable nerves, from suppressed insensible perspiration, or from opposition of any kind, form a disease really nervous; but convulsions in a strong healthy man, occasioned by poison, or by the congestion of blood or lymph in the brain, constitute not a nervous affection, but a highly dangerous disorder.

The symptoms of nervous diseases are very various, and extend from the slightest spasm to the most frightful convulsion. They are also very numerous; as the slightest departure from ordinary habits will frequently excite a train of apparently alarming symptoms, but they are all too well known to be enumerated in this place. Neither is it necessary that we should enumerate their causes. If it is true that nervous affections proceed from the action of the sensitive system predominating over the other system, particularly the arterial, the indication of cure will consist in exciting the energy of the latter, and in restoring an equilibrium to the various functions. Nothing, it is well known, contributes so much to invigorate the muscles, and increase the activity of the circulation, as exercise. Exercise, therefore, is well adapted to the cure of nervous complaints; and our author imagines that it produces its beneficial effects by exciting a kind of artificial fever, which makes the juices circulate, and increases the excretions, particularly those of the skin, and sharpens the appetite. These good effects should be seconded by a moderately strengthening diet, and the pure open air of the country. We must give such tonic and antispasmodic remedies as excite internal action, but at the same time moderate the irritability of the nerves. In using them, however, we should always pay attention to sex, age, temperament, and climate. We should begin with those of the mildest sort, and should temper even them with warm bathing and the use of cooling and mucilaginous remedies. It is by increasing the energy of the arterial system that æther, camphire, and aromatic substances, are so serviceable in affections of the nerves. These disorders are also remedied by the change that takes place at puberty. Even when these diseases are to a certain degree acute, nature, if left to herself, acts in a feeble and languishing manner.

The author now enters on his third class, which he has denominated organic diseases. These, on many accounts, are the most interesting of chronic maladies, though, unfortunately, the

most obscure and irremediable. How often have they become incurable before there was any suspicion of their existence! and how often are they observed to have absolutely no connection with those causes that are said at times to produce them! Organic diseases are chronic, because a great and sudden derangement in the living body would inevitably prove mortal; but even the chronic state is accompanied by so many distressing symptoms, that it is inexplicable how life can be prolonged under them; for the organ still retains the attributes of vitality, however great the injury may be. The author has divided this class into six chapters. In the first he treats of aneurism, which, by Corvisart, is thought to be second only to phthisis pulmonalis in frequency of occurrence. Aneurism of the heart re-divides into active and passive, and he informs us that it is thought sometimes to be the effect of moral causes, as it appeared oftener than formerly during the period of the French revolution. M. Poilroux next speaks of aneurism of the aorta, and then adduces examples, from various authors, of the disease occurring in almost every other internal artery. In most of these, the disease is mortal, and the fatal event can only be retarded by low diet, blood-letting, and digitalis.

The second chapter contains his observations on organic fibrous, cartilaginous, and osseous disease. These three all act mechanically, and are but degrees of the same organization. Their greater or less danger depends on situation; for ossification in the semilunar valves of the aorta, or pulmonary artery, would be much more dangerous than in the parietes of the ventricles. The fibrous transformations of an organ are rare, yet the testicle has passed into that state; but accidental fibrous productions are more frequent, and occur oftener in the womb than elsewhere. They vary from the size of a pea to that of the head of a new-born child. They are susceptible of no other change than that of passing into the cartilaginous or osseous state. They ought to be distinguished from schirrus and tubercle, with which, says our author, Vanswieten, Morgagni, and Baillie, have confounded them. The osseous is the most common and the most dangerous. Unless within the reach of surgery, all these diseases are at present incurable, and probably will long remain so.

The third chapter treats of organic diseases, the effect of encysted tumours. These also act by mechanic pressure, and in the end are mortal; indeed, very speedily so, if they attack an organ essential to life. M. Poilroux has witnessed the production of encysted tumours, during the prevalence of catarrh, when the influence of that disease had been felt on the abdominal vis-

cera. There was first of all a chronic inflammation of the peritoneum, from which exuded an albuminous matter that was soon changed into a membrane, and then into a cyst. "The cyst," says M. Poilroux, "contained a purulent serosity, the absorption of which produced hectic fever and death." The treatment of such tumours is extremely uncertain, as the serosity which they contain has no connection with the circulation. Puncturing them is of little use. Almost all that the author has said on this subject is borrowed from Morgagni, Portal, &c.

The fourth chapter contains observations on hydatid affections. In so far, these resemble encysted tumours, but differ from them remarkably in containing organized bodies, or a species of living worm. Several authors, however, have denied their vitality; but modern researches seem to have put the matter beyond a doubt. Of these *animals* there are five kinds allowed to exist at present: the cysticerus, or animal with a vesicular tail, the polycephalus, or many-headed animal, the dytrachycerus, or animal with a rough bifurcated horn, the echinoccus, so named from its asperities and its round form; and the acephalocystis, or vesiola without a head. The third and fourth species are the rarest. The polycephalus is found in the substance of the brain of cows, sheep, &c. The cysticerus is the most common in horned cattle, and is found oftenest in the liver. Of all the hydatids, it is the most perfect, and has shewn naturalists the true nature of these animals. Some kinds of it have been observed in swine's flesh, and in the choroid plexus and ventricles of the brain of persons who have died of apoplexy, &c. But it is the acephalocystis that has been found most frequently in man, particularly in the lungs, the liver, the womb, the kidneys, or the cellular texture. There is no symptom by which we can distinguish their presence in the living body; nor can we know that they exist there, unless they are excreted entire or piecemeal. They grow sometimes to such a size in the lungs as to occasion suffocation. The treatment of hydatids is still in its infancy. A nourishing diet and tonics have been recommended by some physicians; but the only medicine found to be beneficial against hydatids and other worms, is calomel.

The fifth chapter treats of tuberculous diseases. M. Poilroux lays down the old doctrine of tubercle, as to its becoming soft and melting, &c., and then gives a very full description of the tuberculous disorganization, which is all borrowed from Morgagni and Bayle, and various journalists. He is doubtful whether they are produced by a scrofulous diathesis, or by an acute or chronic inflammation of the organ in which they are formed; but it would appear from M. Bayle's observations, that

inflammation in those cases is an effect and not a cause. The symptoms of the tuberculous diathesis are observed with most ease when the lungs, the liver, or the mesentery are the seat of the disease. The size and hardness of the belly in children, diarrhœa, hectic fever, wasting of the body, and disorder in the glandular system, are symptoms which probably indicate a tuberculous degeneracy of the mesenteric glands. The symptoms, enumerated as distinguishing pulmonary tubercle, are very rarely all present at the same time in any individual; and the disease has often advanced far before any of them are observed, if we except emaciation. The physician, therefore, in giving an opinion about a chronic disease of the lungs cannot be too circumspect.

Cancer is the subject of the fifth chapter, and the author has given a very accurate description of it in its various states. He attempts to distinguish cancer in its first state from encysted tumours and tubercles; but he confesses that it is only when its ravages have commenced on the constitution that we are able fairly to distinguish them; and he has done this with great care. 1. In its structure the tubercle is white, opake, yellow, or grey; whilst the cancerous tumour is semi-transparent, like cartilage, and has often the appearance of lard or brain. 2. The tubercle in its soft state consists of a pultaceous or purulent matter, which remains in the bag which covers it till the rupture of the bag lets the liquor escape by the excretory passages. But cancer, when beginning to be in a liquid state, produces ulcerations which extend to a great distance: it is, at the same time, hideous in its aspect, and appears like a putrid fœtid mass, either black or varying in its colour. 3. The tubercle is found in parts possessed of little natural sensibility, and is attended with little pain; but cancer attacks those organs in preference which are plentifully supplied with nerves, and consequently it is the seat of excruciating pain. 4. The symptoms also differ: hectic fever and emaciation are the characteristic of tubercle, but in cancer the fever is erratic and less frequent, and sometimes, indeed, it is scarce perceptible; the emaciation too is less marked, and irregular mucous symptoms are almost always present. In those affected with cancer too, the skin is of a yellowish hue; but the tuberculous patient has a wan look, and often the upper part of his cheek is of a rosy redness. 5. Though both diseases may attack all ages, tubercle appears generally in infancy, and from the twentieth to the fortieth year; but cancer occurs oftenest between the fortieth and sixtieth year, and is hardly ever seen in early manhood. 6. The natural or morbid suppression of the menses or

hemorrhoids, the abuse of spirituous liquors, depressing passions, and every local cause of a stimulant kind, favour and hasten the approach of cancer; whilst the suppression of insensible perspiration, catarrhal affections, and all the circumstances which are friendly to scrofula, have a tendency to produce tubercle. True cancer is incurable, except when it is purely local and can be extirpated with the knife.

We now come to the author's fourth class, which he entitles hereditary diseases. Of this subject he has treated in six chapters. In the first he speaks of the existence and character of hereditary diseases. They are all radically chronic, and M. Poilroux thinks that those authors err who call any of them acute. The venereal disease, though acute in many of its forms, is no longer so, when transmitted from parents to their children.

In the second chapter our author inquires what are hereditary diseases? and following Portal and others, he enumerates as such scrofula, rickets, madness, epilepsy, convulsions, apoplexy, palsy, disorders incident to teething, pulmonary consumption, asthma, dropsy, gout, and stone; to which Portal himself has added deafness, dumbness, cataract, and cancer. It is the opinion of many, that all chronic complaints may become hereditary, and those, particularly, which attack the lymphatic and nervous system.

The third chapter inquires into the causes of hereditary diseases. M. Portal thinks that they all depend on a scrofulous diathesis; as he and many other physicians have traced a connexion betwixt all of them, in whatever part of the animal economy they have their seats. In proof of his opinion on this subject, he has advanced a series of facts, which we think it unnecessary to analyse; but from these he has concluded, that scrofula at every time of life is the most formidable enemy of the human race, and that under various shapes it occasions more deaths than all other chronic diseases whatever. The venereal disease, when it has been transmitted by generation, and the scurvy, in his opinion, are but varieties of scrofula. In short, if we believe him, scrofula produces the chronic disorder of every internal part, whether in the bones, the chest, the heart, the brain, the liver, the spleen, or elsewhere. But it would appear that certain organs have an hereditary predisposition to be acted upon by scrofula in preference to others, at particular periods of life; and this predisposition may prevail in one member of a family, and not be seen at all in another.

The fourth chapter is on the treatment of hereditary diseases, and in particular those of the nervous and lymphatic systems.

Are these diseases curable or incurable? Supposing that all hereditary diseases are the offspring of scrofula, our author divides them into three classes. 1. In the first are ranged all those nervous and lymphatic diseases which attack the body before the age of puberty. 2. In the second, those are included which spring up after puberty, and all the diseases of infancy which have resisted the beneficial change which so often takes place at that period. Here, though the glands of internal organs are obstructed, they are still thought to be capable of resolution. 3. In the third are comprehended the tuberculous or cancerous obstructions of the internal viscera, which are found by experience to be incurable. M. Poilroux enters on this subject at some length, and ends the chapter with a few observations on gout and chronic rheumatism.

The fifth chapter contains the *prophylaxis* of hereditary diseases; and here the author bitterly laments that Governments have not hitherto interfered to prevent the intermarriage of diseased persons. In the meantime he recommends that we should as much as possible oppose temperament to temperament in forming such conditions; for instance, the fair skin and delicate complexion of the scrofulous should be allied to a constitution in which there is much strength, where the flesh is firm, the skin brown, the hair black, and in which there is a moderate degree of plumpness, a freshness of complexion, and an active enterprising spirit. In the same way persons, who are in situations unfavourable to health, should marry those who are not exposed to a similar influence. The author goes on to illustrate his plan, but his observations we think unnecessary to mention.

To prevent hereditary disposition at the earliest period, we should attend to the regimen of pregnant women, and should try to obviate nervous irritation in the first period of pregnancy, and we should endeavour to strengthen the system in the second. Here exercise is indispensible; and if plethora make its appearance, it must be remedied by blood-letting. At this time, indeed, the high-born or wealthy lady should consider the rustic matron as a model of imitation; but seeing the difference of constitution, we should imitate with caution.

M. Poilroux now enters at some length into the physical education of children, which he thinks should be moderately but gradually hardy. To children who are predisposed to such diseases, we observe that he allows the use of wine and coffee, at a very early age; and when the child is very delicate, he is of opinion that the period of lactation should be considerably prolonged. But the mother who is so predisposed ought never, he

says, to nurse her own child. In their studies, such children should find amusement rather than fatigue, for intellectual toil requires bodily repose, which to them is death. With them, too, the age of puberty will require more than ordinary attention, that the efforts of nature may be duly seconded. Whatever, says M. Poilroux, counteracts scrofula is, in such cases, beneficial. The patient should live on a dry soil, which is exposed freely to the sun, is far from marshes or fogs, and where the temperature is rather warm than cold. The air should be pure. He should also lodge in a house not recently built; and his apartment, besides being clean and airy, should be exposed to the sun's rays, and elevated considerably from the ground. He should sleep on rather a hard bed. His diet should be half animal, half vegetable. The dishes should be savoury and lightly seasoned, but he should eat moderately, and ought never to taste bread which is not leavened. His clothes should keep out the cold in winter, but should allow the breeze to impart vigour to the skin in summer. He must keep his feet warm and cover his head lightly; and by guarding against sudden varieties of atmospheric temperature, and using dry or aromatic friction to his whole person, he should try to make his insensible perspiration free. His sleep should be moderate, and he ought to rise early; every means also should be employed to prevent onanism, or a too early marriage. If scrofula is really present, we must use its medical antidotes, such as chalybeate, and sulphureous mineral waters; mercurial, antimonial, and antiscorbutic remedies, alkalies, sea and lime water, hemlock, bark and other bitters. These may be all varied at the discretion of the practitioner; but after puberty they must be used with caution. Issues and blisters may be of great use before puberty, if applied to the scalp, behind the ears, and to the back of the neck; immediately after that period, to the chest, the arms, and the sides of the chest; and at a maturer age to the lower extremities.

The author now finishes the fifth chapter with some remarks on the hereditary diseases of different periods. In infancy, the nerves, the head, and mesenteric glands are most affected; in youth we have hæmoptysis, phthisis, asthma, and organic diseases of the heart; in manhood, the epigastrium, and the viscera of the abdomen are the parts affected; and in old age, the head is again the seat of very formidable disease. Thus is the pathological circle of Hippocrates completed.

The author, in his sixth and last chapter, speaks at great length on pulmonary phthisis; but were we to enter on that subject, we should go over most of the ground we have just passed, and repeat what we have already said in some of our late

numbers. We shall, therefore, here close our analysis of M. Poilroux's work, in which there is little originality. The author has shewn a considerable extent of reading and much judgment in the selection of his materials. Perhaps he has attributed too much to the agency of scrofula, but this point we shall leave to the determination of the reader, as we are always more anxious to give him a correct view of an author's labours than to trouble him with speculations of our own.

M. DELPECH'S CLINICAL SURGERY OF MONTPELIER.*

M. Delpech, already well known by his surgical works, particularly his Treatise on Hospital Gangrene, now adds largely to his claims on the gratitude of the profession by the publication of the results of his observations, made during the space of ten years, as head of the surgical hospital at Montpelier. This large volume contains several distinct essays on practical subjects in surgery, viz.—On the ligature of the principal arteries; on deformities of the feet; on fractures of the humerus; and on venereal diseases.

The first of these presents subjects of such extreme interest, and so many points which still admit of great modifications and improvements, that we make no apology for selecting it, though at the risk of failing in novelty. Besides, some of the cases, which form the most important part, and which we shall briefly detail, throw light on other points.

Case 1. The patient was received from the army of Portugal, at the Hospital St. Eloi, March 15, 1814. Two months before, a musket ball had passed through the arm, between the humerus on one side, the biceps, coraco-brachialis, and brachial artery on the other. The wound was infected with hospital gangrene, and the man's general health much affected. Convinced by experience of the utility of actual cautery in this disease, M. Delpech only hesitated to apply it because of the proximity of a large vessel; but choosing rather to run the risk of opening the artery by the iron than to see it perforated by the progress of the disease, he cauterized the whole surface of the wound, applying the iron but superficially in the deeper parts. This measure had the desired effect on the local affection, and

* Chirurgie Clinique de Montpelier, ou Observations et Reflexions tirées des Travaux de Chirurgie Clinique de cette Ecole; par le Professeur Delpech. pp. 494. 4to. Paris et Montpelier, 1823.

the health improved in proportion, but on the eighth day a hemorrhage occurred, which M. Delpech satisfied himself proceeded from the brachial artery. "Under other circumstances," says he, "I should have had no hesitation in tying the artery immediately, above and below the wound, but a degree of tumefaction at the upper part of the arm, threatening a return of gangrene, made the propriety of placing a ligature there doubtful." He therefore resolved on tying the artery at some distance above the wound, even though he should be compelled to repeat the operation below to prevent hemorrhage by anastemosis. He exposed the artery between the pectoralis and latissimus dorsi muscles, below the origin of the infra-scapulary artery, passed a grooved sound and an eye-probe with a ligature under it. "Not then aware," says he, "of the dangers of ligatures of reserve, I introduced a second, and tied the first only. The wound was not brought together; the temperature of the limb sunk, and the pulsation of the radial artery ceased after the operation. On the second day the limb was as warm as the other; on the third, the pulsation of the radial artery could be felt. Until the ninth day all went on well; about noon hemorrhage took place from the upper wound: on attempting to tighten the ligature of reserve it came away, and was followed by a jet of arterial blood, which ceased on pressure; the lower ligature was firm, and it became evident that the ligature of reserve had caused the accident it was intended to prevent. There was little time to deliberate; the assistant who compressed the subclavian artery felt fatigued, and M. Delpech determined to tie the axillary. He made an incision in the groove below the clavicle, which separates the pectoral from the deltoid muscle, cut through the pectoralis minor, near the insertion, passed his finger under the brachial plexus of vessels and nerves, raised them to the surface of the wound, passed a single ligature under the artery, tied it, and brought the edges of the wound together. The circulation of the limb was restored, but the patient died ten days after the last operation. On dissection, the artery was found obliterated below and above the original wound, as far as the first ligature; in the situation of the ligature of reserve the artery was cut through, and still pervious. The ligature on the subclavian was evenly applied, had cut through the two inner coats, and a coagulum was found immediately above it.

In the second case, hemorrhage was the consequence of hospital gangrene, after amputation at the shoulder joint. M. Delpech's assistant, Dr. Galtié, tied the subclavian artery at its passage over the first rib. The patient, much reduced, died in

three days, and dissection showed that the axillary artery had been perforated by ulceration, the subclavian being rendered impervious by the ligature.

In the third, a slight gun-shot wound in the hand was, at the end of some months, seized by hospital gangrene, which spread to the fore-arm. A few days after the use of actual cautery, bleeding took place from the upper part of the radial artery. M. Delpech tied the brachial artery; the hemorrhage ceased, but the case, from other causes, terminated fatally. After death it was found that the artery was completely obliterated.

In the fourth case, an inguinal aneurism had not been recognized until its most prominent part gave way. A portion of the tumour extended above the crural arch, along the inner side of the iliac vessels. Obliged for this reason to pass the sound, and probe under the artery from the outer side, M. Delpech was so unfortunate as to wound it. Compressing the vessel with the finger and thumb of one hand, he passed a second probe under it higher up, and tied it with a single ligature. Circulation returned in some degree, but eventually the limb mortified, and in ten days the patient died. The obliteration of the artery was nearly perfected, but a little below the ligature traces of the wound in the operation were evident.

In the fifth, a wheel passed over the patient's leg, and caused a comminuted fracture of both bones, with great extravasation, but no external wound. The swelling of the leg was evidently caused by bleeding from a considerable artery, and had a pulsatory motion, corresponding to the action of the heart. Uncertain what vessel might be wounded, and unwilling to amputate, M. Delpech tied the femoral artery in the upper part of the thigh, cut both ends of the ligature close to the knot, and united the wound by the first intention. The case terminated favourably; a small point of the wound opened on the 25th day, gave issue to the ligature, and closed on the following day.

Case 6. In this an aneurism of the femoral artery arose, fifteen days after a wound by a small sword, and a week after it had healed. The pulsation was obscure but sensible. M. Delpech passed a single ligature round the femoral artery, immediately below the groin, with the happiest results; the tumour diminished, and the patient soon recovered.

Case 7. In July 1815, in some disturbances at Montpelier, a man who had formerly been wounded severely in the right leg, was struck in the same limb by a gun-shot, which broke both bones. The extent of the injury was such, as to render amputation necessary. It was performed below the knee, and all proceeded well until the seventh day, when bleeding took

place, evidently from the popliteal artery. M. Delpech tied the femoral artery immediately above its passage under the sartorius. The hemorrhage ceased, the progress of the case was favourable, and the patient speedily recovered.

Case 8. On the same occasion another man was severely wounded in the left thigh; there were three large openings in the soft parts, and the bone, except at its extremities, was shivered into many fragments. The patient and his friends obstinately resisted the proposal to amputate. It was not until the fourth day had elapsed, that the severity of his sufferings induced him to change his determination. On the sixteenth day after the operation, a bleeding took place to a considerable extent. M. Delpech immediately tied the femoral artery just below the crural arch. The patient, from the effects of fear and debility, remained long in a dubious condition, but in the end recovered completely.

The histories of the cases are succeeded by considerations on the most remarkable circumstances in them, of which we shall attempt to give an abstract.

"The first of these cases," says M. Delpech, "suggests some important remarks on the effects of ligatures of reserve. In the present instance, the employment of this measure was unquestionably the cause of the ulceration of the artery and of hemorrhage. Although the danger of the practice has been denounced by Scarpa and other writers, "yet," adds he, "many surgeons in Europe still commit the same error that I, at that time (1814), did." It is a pity that M. Delpech's candour did not extend a little farther, and lead him to confess that the danger of the practice had been long recognized by English surgeons, and that France is almost the only part of Europe in which it continues to be employed and recommended even to the present day. It is impossible indeed not to notice a studied silence, as to the labours of our countrymen on this subject, which they have so diligently and successfully cultivated.

Four of these cases relate to a question which has often been agitated and still admits of some doubts, viz. in case of an injury of a large artery, its ligature being judged necessary, should it be effected immediately at the seat of injury, or at some distance above? M. Delpech prefers the latter generally, and considers that he has proved, (in his Treatise on Surgery) that in the case of a recent puncture, wound, or rupture of a deep-seated artery, it should be tied above the injury. and even above the ecchymosis proceeding from it; that in the case of a circumscribed tumour following a wound of an artery either plan may be adopted, though the ligature above the artery is preferable:

and lastly, that a vessel should be tied in the seat of injury, when the lesion of other parts is considerable, and the ends of the artery easily accessible. We need hardly tell our readers, that these precepts are in many respects wholly opposed to the practice and principles of our best surgeons. It is not to be denied, that the ligature of an artery above the seat of injury is occasionally, nay frequently successful, but we are in possession of a sufficient number of facts proving its uncertainty and hazard, to justify the rule inculcated in this country, viz. that in the case of a recent wound of an artery, or of a diffused aneurism from that cause, it is incumbent on the surgeon, if possible, to cut down to, and secure the vessel above and below the wound. We need not here give proofs; it is enough to refer to the works of J. Bell, Hodgson, Guthrie, &c.

The fifth case presents a mode of practice at once novel and bold, and for which M. Delpech allows his obligations to the example of Professor Dupuytren in similar circumstances. Farther experience is required to determine to what extent and in what circumstances it is applicable, in the mean time it affords, at least, a chance of obviating the necessity of amputation in an injury of the most serious description. M. Delpech thinks that its success would justify us in applying it in analogous cases, as for a wound of the maxillary artery in the zygomatic fossa, and even occasionally in wounds of the upper parts of the radial, ulnar, and tibial arteries. He mentions incidentally, that he witnessed a case of aneurism of the ophthalmic artery filling the orbit and raising the eye. The carotid would have been tied, if the consultants could have formed an idea of the plan of operation, and if they had known of similar cases. Sir A. Cooper and Mr. Abernethy, to whom the case (the date of which is not stated) was communicated, agreed in the propriety of an operation. M. Delpech has since successfully tied the left carotid, for the cure of an aneurism of the superior maxillary artery, which had filled the antrum, the nasal fossa, and the orbit on the same side.

M. Delpech thinks that the sixth case proves the possibility of the cure of an aneurism, arising from a wounded artery, by a ligature above the injury. This will be at once admitted when the aneurism is circumscribed, and the case has therefore no claim to originality in proving a point now well established.

The two last cases shew that hemorrhage from a large artery, in an amputated limb, may be restrained by a ligature at a point nearer the heart. If the practice be justifiable under any circumstances it is in such as these, where the extent of the artery and the number of branches below the point of injury are so

inconsiderable, as to diminish the probability of bleeding from below the ligature by means of anastemosis, and where the condition of the parts must render the attempt to discover and tie the bleeding point extremely difficult; at the same time it is more than possible, that in adopting this plan, the surgeon might ultimately find himself compelled to do under disadvantageous circumstances, what he might before have effected with more ease and with a better prospect of success.

M. Delpech's opinions on the subject of the ligature of arteries are contained in the following conclusions :—

1. That ligatures of reserve should be abandoned as useless and dangerous.

2. That the vessel should be tied with a single ligature, sufficiently small to rupture the inner coats without much exertion, and yet not so fine as to produce rapid mortification or ulceration.

3. That the ligature should be placed smoothly round the vessel, without comprising any other parts, and so as to make uniform pressure.

4. That the vessel should be separated as little as possible from the surrounding parts, and therefore a small instrument used to pass the ligature under it.

5. That the surgeon should attend to the feeling, announcing the division of the coats of the vessel, as pressure short of this would be insufficient to secure obliteration, and greater might induce mortification of the cellular coat.

6. That nothing should be placed under the ligature; first, because it is useless; secondly, because a measure which effects a partial division of the coats of an artery, probably renders its obliteration uncertain; and thirdly, because the practice renders union by the first intention impossible, and deprives us of a great advantage, especially if the artery be diseased.

7. That the divided parts should be brought together so as to ensure union by the first intention, and that less with a view of healing the wound, than to agglutinate and confound together the parts about the artery, so as to effectually obliterate it.

8. That the ligature may be removed on the fourth or fifth day, taking care *to press and bring the parts again* together.

On Deformities of the Feet.

This essay contains the account of some original and very ingenious methods employed by M. Delpech for the purpose of effecting a restoration to the natural form. Of these we find it extremely difficult to give an accurate account, without making references to the illustrative plates. We shall, therefore, content ourselves with noticing the most remarkable case, and the observations made on some of the others.

In March, 1816, a boy, aged nine years, was brought to M. Delpech. The right foot had been deformed from birth, in the following manner: the foot was so extremely extended as to be almost turned backwards; the os calcis was elevated so much as to be applied to the posterior surface of the bones of the leg. The attempt to bring or bend the foot forwards was succeeded by an insurmountable resistance, and an extreme tension of the tendo Achillis. The tibio-tarsal articulation was very lax, permitting much lateral motion, and particularly a great inclination to the inner side. The muscles of the leg and thigh were weak and atrophic. When resting on the ground the toes were inclined to the back of the foot, and the base of support was formed by their plantar surface, and by the heads of the metatarsal bones. If the foot in this state was permitted to support the body, as in walking, it became inverted, and twisted on its longitudinal axis, so that the weight rested on the fourth and fifth metatarsal bones. The deformity had originally consisted in the direction of the foot downwards, the lateral displacement being scarcely sensible at first, but increasing as the child advanced in years. From different causes, no attempt had been yet made to check the progress of the deformity.

The age of the patient, the nature, extent, and duration of the deformity had rendered the case embarrassing. M. Delpech remarked that, after the accidental rupture of the tendo Achillis, the greatest care and most methodical treatment always failed in attaining an immediate and direct union; and that the point injured presents a knot or swelling, and subsequently, a wasting or depression, the tendon having lost its original breadth and thickness. These phenomena depend, as in the cases of fracture of the patella or olecranon, on the interposition of a new formation connecting the divided extremities of the injured organ. It seemed probable, that what happened naturally in one case might be obtained artificially in another, and that the extent of the new formation might be considerably increased by means of permanent, steady, extension. The tendon might be divided completely, and that without touching the skin immediately over it. The foot might then be fixed by a suitable apparatus, so constructed as to admit of its being brought forward gradually.

The apparatus consisted in two elastic garters, padded, the one buckled above, the other below the knee; with a segment of a circle of iron, attached to the upper garter, and passed in a groove of the lower one, which could be fixed there by the pressure of a screw. Two rods of iron projected from the lower garter for-

wards, an iron axis running through them, and supporting two cog wheels. An elastic band was buckled round the foot, behind the toes, and gave attachment to two narrow iron plates, running upwards, and indented in their upper half, the indentations exactly corresponding, and fitting to the teeth of the cog wheel on each side.

All being prepared, and the patient laid on his belly, M. Delpech plunged a knife in front of the tendon, from the inner to the outer side of the leg, making an incision an inch long, in the integuments on each side. Withdrawing the knife, he introduced another, very convex at the point, and directing it from before backwards, he cut through the tendon transversely, without injuring the skin immediately over it. The operation was not very painful, and immediately afterwards M. Delpech was gratified to find that he could bend the foot, so as to bring it to a right angle with the leg. Satisfied with this attempt, he fixed the foot in the same state as before the division of the tendon, bringing the heel forwards by a bandage passing under it, and fixed to the iron bars which ascended from the toes to the knee. A compress was fixed, with sticking plaster, over the ends of the tendon, which, as far as could be judged through the integuments, were in immediate contact. The limb was then placed on a pillow, the leg and thigh being bent. Little pain or constitutional disturbance followed, and it was not until the tenth day that M. Delpech exposed the wound, but without moving the apparatus. The swelling was confined to the wounds and point of section, the ends of the tendon appearing to be in close apposition.

On the twelfth day the suppuration of the wounds was accompanied by some sloughs of tendon, attributable to the exfoliation of the divided parts. On the twentieth day all pain had ceased; one wound had healed, the other nearly so. No interspace was perceptible between the ends of the tendon, but merely a contraction or diminution of its bulk. The cicatrices in the integuments, and the divided part of the tendon, were plainly seen to move upwards and downwards when the foot was bent and extended. On the twenty-eighth day the wounds were quite closed, and the cicatrices somewhat retracted in front of the tendon. The contracted part of that organ was only a few lines long; it evidently moved with the foot, and M. Delpech judged it sufficiently firm to bear extension. The bandage over the heel was accordingly slackened, the foot a little bent on the ancle, and fixed in that posture by a moderate rotation of the cog wheel, elevating the ascending rods a few teeth higher. M. Delpech was surprized to remark that no pain followed, and

that though the point of the foot was raised considerably, there was not any evident stretching of the new formation. He discovered, however, that the patient had loosened the band below the knee, and had bent the leg more on the thigh. He replaced the apparatus, and by means of the segment of a circle, already described, extended the leg on the thigh almost completely, at the same time placing the patient on his back. Some pain succeeded, principally at the point of section, but extending over the whole limb.

Up to the 31st day the foot was progressively brought forwards by the apparatus. Every time that the force distending the tendon was increased, the patient complained of pretty severe pain, lasting two or three hours, and gradually ceasing. M. Delpech, however, observed that the laxity of the tibio-tarsal articulation, caused by the original deviation of the foot inwards, began to produce a deviation in the opposite direction outwards, when acted on by the distending force of the apparatus. To obviate this accident, a leather garter was buckled below the knee, and to it, in the front of the leg, was fixed a strap two inches long, provided with a buckle at its lower end. A second strap was fixed round the foot, behind the toes, and extending upwards in front of the leg, was buckled to the other. The leg was then placed in a fracture-box, with two large padded splints, extending from the knee beyond the foot. After the application of this apparatus, the strap of the foot was buckled into that of the knee, so that all lateral deviation being prevented by the splints, the foot was carried directly forwards.

The increase of pain at the point of section shewed that the new apparatus acted efficaciously: the foot made great progress; and, on examination, the ends of the tendon were found nearly an inch and a half asunder. A few days sufficed to bend the foot so as to bring it to a right angle with the leg; but the apparatus was retained so as to keep the parts in that position during the period necessary to effect the solidification of the new formed part between the ends of the tendon. At the end of a month it appeared to have reached the greatest possible extent of its elongation, contraction, and density. Its length appeared to be about two inches, its bulk equal to half the natural size of the tendon, and it firmly resisted every attempt to bend the foot farther than to a right angle with the leg. The tendency to deviation outwards still remained, and evidently was only to be remedied by an increased developement of the bones forming the articulation. The patient could stand upright, could support himself on one or both feet, could walk quick or slow, and could even run, without any other inconvenience than that

resulting from the slight deviation of the foot. At this time his recovery was retarded by the occurrence of scrofulous abscesses about the knee; his health was, however, re-established by sea bathing, and similar measures.

"He now," says M. Delpech, "at the end of seven years, enjoys good health, and by the security and rapidity of his progression, forms a subject of wonder and admiration to all who are acquainted with his previous condition."

M. Delpech avoids entering at length into any inquiry as to the causes determining deformities of the feet. He is inclined to think that, in whatever manner produced, the deformity commences in the bones, and that the distortion of muscles, &c., is only secondary. The deformity is generally congenital, and in its commencement the muscles are in a state of quiescence, and not partially relaxed and partially stretched, as might be supposed the case, were the change of position of the bones caused by the contraction or imperfect developement of one or more of the muscles operating on them. This fact becomes still more evident when in such cases the muscles are atrophic, and, as it were, paralyzed. This last argument may indeed be answered by a fact which M. Delpech has uniformly observed, namely, that attempts at walking while the deformity remains uncorrected, instead of favouring, injure the developement of the muscles, not only in the leg but even the thigh; and that in such cases the most certain means of removing the atrophic and semi-paralytic state, consist in removing the deformity by suitable mechanical measures. Hence, though the muscles of a distorted limb may be atrophic and paralytic, even at the time of birth, it is impossible to say that this state may not have been preceded by an increased developement of some particular muscle or muscles, drawing the moveable part of the limb in some particular direction.

From observing the occurrence of atrophy in the muscles of a deformed limb, even at a period too early to admit of their exercise, M. Delpech deduces the physiological law—that the preservation of the size and activity of muscles depends partly on their retaining the just degree of tension, naturally designed for them, and which becomes changed in cases of deformity. Whilst this error in the state of tension remains, whether it be in excess or defect, the bulk and power of the muscles progressively diminish, even notwithstanding the physiological necessity for their increase, which attempts at exercise produce. The proposition, on which all hopes and every plan of treatment must rest, is the natural consequence of the former, viz. that the power of atrophic muscles, and the activity of their nu-

trition, may be restored in cases of deformity of the extremities, by correcting the faulty position of the bones of the part. Guided by this principle, the surgeon must vary the mechanical means of effecting the object in view, according to the variations presented by individual cases.

From the results of his observation and experience, M. Delpech concludes—

1. That little advantage is gained in attempting the treatment of deformities of the feet before the patient is able to walk, as it in general happens that such endeavours tend to diminish the bulk and contractibility of the muscles.—This conclusion, it must be allowed, presents something inconsistent with his observation, that an atrophic state of the muscles is the natural consequence of the distortion of a limb.

2. That it is important to proportion the force of the apparatus, not only to the extent of deformity, but also to the power of the muscles; for if, in the hope of speedily removing the deformity, an excessive power be employed, the muscles are kept at rest, and diminish in size and activity, whilst the pressure necessarily made on the integuments and subjacent parts is so great as to cause inflammation, suppuration, or even gangrene, and perhaps render the disease incurable, from the impossibility of applying any more effectual apparatus at a future period.

3. The power which it is intended to apply should have an opposite direction to the deviation, and to ensure this the combination of several circumstances is necessary, the absence or presence of which render any case more or less favourable; they are—

(*a*) The existence of a point of support for the power to be applied, near to the deformity, extensive, solid, and not easily hurt.

(*b*) That the power be applied as far as possible from the deformity, not only from mechanical causes, such as the greater power of a long lever, and the diminution of pressure on the skin, but also, because as the deformity affects several bones, the farther the power is exerted from the centre of deformity, the greater is the number of bones acted on.

(*c*) The action of the power employed should be perpendicular to the parts on which it is exerted, as well as on the parts which are to be moved.

(*d*) The power employed should be elastic, so as not to oppose a sudden and forcible resistance, even to efforts acting in a direction contrary to that in which it is applied.

4. It is of the greatest importance that the apparatus should

be so disposed as to admit and to facilitate not only locomotion, in which the limb merely supports the body perpendicularly, but also the action of the muscles in every direction. For this reason the apparatus should be constructed with reference to anatomical principles, and should be as light as possible: those employed by M. Delpech, in lateral deviations, did not weigh more than two ounces, and sometimes less.

The author adds, that there are cases to which these remarks are not applicable, and in which the required conditions cannot be fulfilled. The case we have related is an instance, and in such the practitioner is obliged to look for and create new resources.

As to the section of tendons, M. Delpech is convinced of its advantages, and of its practicability in every situation in which these organs oppose themselves to the restoration of the natural form of the extremity.

The two remaining papers in the book are by no means of the same interest or value with those of which we have presented an analysis: we are prevented by our limits from entering on them at present, but may probably take an opportunity of giving an account of their contents at a future period.

M. Biett on the Couperose.—Genus Acne of Willan.*

We have repeatedly given our readers an abstract of what we conceived to be some of the most useful papers in the able dictionary from which we extract the present article. We know not exactly why the French so far exceed us in the present day, in the number of their medical publications; but so it is, that not a month passes in which they do not usher into the world some half dozen of new treatises and dissertations, with a corresponding number of dictionaries, journals, and memoirs, while in England, the land of speculation and enterprise, new publications are comparatively rare. We know many reflecting men who doubt the utility of multiplying books without end; and there are certainly many crude indigested notions put forth, which had better never have passed beyond the walls of the

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* Dictionnaire de Medicine, par M.M. Adelon, Beclard, Biett, Orfila, &c. &c. Tome VI. a Paris, 1823.

closet in which they were conceived, yet all are not equally useless; and among the very best, both as regards the general plan, and the execution of many of the separate articles, we ought to class the present dictionary. There is at present much heat and zeal abroad in the French medical world, which, if they often lead to hasty and false deductions, at least provoke inquiry and examination. We ought not to forget that our own boasted coolness and caution in all that belongs to science may be carried to excess; and that it is better to have the public mind alive and stirring, even at the expense of a little ridicule and false theory, than to permit a leaden apathy to prey on men's minds. If some of our great men would forego a little of their pride, and cease to disdain being useful when they can no longer be original, we might yet hope to see additional spirit and enterprise infused into our medical literature.

M. Biett, who is charged with the pathology of the skin in the new medical dictionary, has the advantage of being physician to the hospital of St. Louis, which his predecessor Alibert calls the *depôt* of skin diseases for France, and where he derived the materials for his splendid work. In the spring, M. Biett gives an excellent course of clinical lectures, which is one of the few things the English student may follow at Paris with equal pleasure and advantage. M. Biett's candour and modesty are not less conspicuous than his deep research and discriminating judgment, with regard to cutaneous diseases, and form a striking contrast to the pompous egotism with which Alibert speaks of himself and his labours; and yet setting apart the splendid plates with which his work is ornamented, we perceive little he has to boast of, unless having added a new genus to the classification of dartres (*herpes*) by Roussel, and having extended the use of sulphureous preparations to almost all the maladies of the skin.

By Willan, Bateman, and most English writers, the genus *acne* is classed with the tubercular affections, while Alibert considers it as essentially a pustular disease, and accordingly ranges it among the dartres, under the name *dartre pustuleuse*. M. Biett also considers it as pustular. "If the process of the *couperose* be carefully watched, successive crops of pustules will be observed to form at every stage, which, being frequently renewed, but never completely resolved, leave a crowd of inflamed, indurated points, which constitute the cutaneous tubercles." M. Biett's opportunities for observation, and the habitual candour and caution with which he expresses himself, entitle his opinion to regard; in the present instance, however, it appears to us that he has misconceived Willan's and Bateman's account of the acne.

as entirely precluding suppuration; whereas the definition of the order *tubercula* distinctly recognizes partial suppuration as frequently taking place; and the same fact is stated in Bateman's account of the individual species, which he describes with equal clearness and fidelity. "Tubercles," adds M. Biett, "not having place constantly, and only developing themselves, in consequence of repeated crops of pustules, ought not to be taken for a fundamental character." We believe that the word pustules, substituted for tubercles, would render the above account more strictly true; for in effect, both Alibert and Biett admit that many of these tubercles never suppurate, while the others suppurate slowly and imperfectly. In the most frequent and most intractable of the species, the *acne rosacea* pustules are exceedingly rare, and ought rather to be considered as an accidental effect of the irritation which prevails in the dermoid system of the face, than as giving rise, by their repeated but imperfect suppuration, to the tubercles, which are always present. To describe the disease with Alibert, as *eminently pustular*, is to convey a very erroneous idea of its nature. It is as little pustular as the furouncle or the anthrax, which no one has characterised as suppurative diseases, although an imperfect formation of pus is almost a constant attendant of both. Every inflammation, when carried to a certain degree of intensity, forms matter sometimes serous, sometimes purulent, a circumstance which takes place sufficiently often in the inflammation of acne, although the general tendency of this inflammation is to form tubercles. We are inclined to believe that the irritating and escharotic applications, so freely employed at the hospital of St. Louis, by modifying the inflammation, may often cause the tubercles to suppurate; and that M. Biett is thus led to mistake the effects of his remedies for the natural phenomena of the disease. We are at a loss otherwise to account for so accurate an observer characterizing the acne as eminently pustular. We ought to ask pardon of our readers for entering into a discussion which is in some degree verbal; yet we feel it to be a part of our duty to guard from unmerited reproach the most scientific classification which has yet been made of skin diseases—that of our lamented countrymen Willan and Bateman.

M. Biett reduces the four species of acne of Bateman to three, by considering the simplex and the punctata as one, though they are certainly essentially different in their nature. The *simplex* manifests itself chiefly upon the cheeks, nose, and forehead, in the form of reddish pimples which suppurate slowly, and towards the end of the second week a little matter escapes, which forms a thin scab in their summits M. Biett believes

that this affection, though often obstinate, is not connected with any disorder of the abdominal viscera. We know that much ridicule is attached to imputing every scab and pimple to disorder of the digestive organs, yet we think nothing is more true than that all the species of acne are chiefly owing to this cause.

In the second species of Biett the tubercles are larger and more numerous than in the first, with an indurated base and a conical form; their colour is a deep red, and they do not suppurate till the end of many weeks. Some times they are grouped together and form one inflamed tumour, which deeply affects the rete mucosum, and even the subjacent cellular texture. The site of these tumours almost always remains in some degree livid and depressed. In young sanguineous subjects the inflammation is habitually vivid, and is exasperated by the least errors in diet, or remaining in a heated apartment; and though they cure more promptly in these individuals, relapses take place from the slightest causes.

The third species, which occurs more particularly in adults, commences by some reddish points upon the cheeks and nose, which suffer a sort of heat and tension after stimulating repasts. After a time successive crops of pimples appear, which weaken the capillary system of the skin, so that it remains permanently injected, tumified, and of a violet red, most deep around the tumours. On those points where the pimples are most frequently renewed and most plentiful, the tumours become of a purple colour and so large as to destroy the harmony of the features; which, when conjoined to the discolouration, caused by a varicose state of the superficial veins, renders the aspect more or less repulsive. It is this state of the disease which Willan calls the *acne rosacea*. In some cases the tubercles extend even to the neck and superior part of the back, while in more rare instances they are entirely confined to the nose, the tissues of which become swelled to such a degree as to give to the feature twice or thrice its original size. This form of the disease is next frequently met with among those whose life has been chiefly spent in taverns, such as Bardolph of old, upon whose infirmity Falstaff so often indulges his pleasantry.

M. Biett has observed that the acne affects particular ages; men between 30 and 40, and women at the critical period, who are of the bilious temperament; the acne simplex, is almost always observed in the young and sanguineous. If we are to believe Biett and Alibert, women are more subject to this complaint than men. In many cases its connection with derangement of the functions of the abdominal viscera, is evident; hence, the author of the Zoonomia deduces his *gutta rosea hepatica*, and *gutta*

rosea stomatica. Its connection with the uterine system is much insisted upon by the French writers, who, indeed, have a predilection to attribute many disorders to aberrations in the functions of the ureters, and to hemorrhoidal fluxes. We should hope that the English predilection to attribute many diseases to the digestive system is more rational, although, without doubt, fashion, and the authority of great names have their influence in England as well as in France.

M. Biett regards this complaint as being often hereditary. Darwin also took the same view of it, and styled the acne simplex, *gutta rosea hereditaria.* Excesses of the table, vicious habits, those professions which, from posture, or other causes, produce a determination of blood to the head, cold and humid climates, such as those of England and Germany, grief, fright, anger, the abuse of cosmetics, are some of the causes on which our author more particularly insists.

The superiority of Willan's classification to that of Alibert is especially conspicuous, in enabling us to distinguish with more certainty the different affections of the skin. It is thus that the *dartre rongeante scrophuleuse,* and the *dartre squameuse humide* of the French pathologist, conform themselves, in some degree, with the simple and easily distinguished affections of which we treat; and it is thus that M. Biett, in distinguishing these affections, is obliged to have recourse to those original characters, upon which the classification of Willan is essentially founded, but of which M. Alibert hardly ever makes mention. We are sorry to observe that M. Biett, in drawing the diagnosis between the *couperose* and the *dartre squameuse humide,* insists particularly upon the pustular character of the former. The diagnosis seems to us to be otherwise well and faithfully given, but cannot be of much service to the English practitioner, as it turns chiefly on the difference between papulæ and pustules, a distinction which every student with us is taught to observe. The particular variety of the *dartre squameuse humide,* which most resembles the acne, is, according to Biett, the same as the lichen agrius of Willan.

The *dartre rongeante scrophuleuse,* which, from its description, seems to be the same with the *lupus* of Bateman, is apt at its commencement to be mistaken for acne; but the tubercles by which the lupus developes itself soon enlarge, become more or less vivid, and degenerate into eating ulcers, which destroy the cellular tissue of the cheeks and nose. It is rare that syphilitic pustules or tubercles are limited to the face, but when they are so, they more particularly affect the commissures of the lips, and the parts along the wings of the nose; their aspect is coppery

and shining, and they have something of the unequal ragged surface of vegetations. We have observed that, in most cases, when syphilis goes the length of affecting the skin, there are evident marks of a depraved state of the general health; the face is sallow, the flesh wasted; there is a constant state of feverishness, aggravated during the night, and accompanied by exhausting sweats, loss of appetite, and a marked mental despondency. In this state mercury, to a greater or less extent, is, we believe, indispensible, though there are many slighter affections of the skin reputed venereal, which are curable by nearly the same means perhaps, which would succeed in the couperose; and hence to mistake them is a matter of less moment.

Stimulating applications have been brought very much into vogue in France, by Alibert, in the treatment of acne. Muriatic acid, and the nitrate of silver are those he most ordinarily puts in use; and they have the effect, according to M. Biett, of rendering what was a chronic an acute affection. M. Biett does not attempt to disguise the danger of such applications; for he adds, that it is necessary to have all the discernment of M. Alibert himself, to distinguish the cases in which such remedies are admissible; for he has seen severe erysipelas, leading to cerebral inflammation, result from this treatment, and often deep ulcerations, much more troublesome than the original complaint. When the tubercles or pustules are numerous, inflamed, and confluent, and the subject young and sanguineous, M. Biett prefers general bleedings, reiterated applications of leeches behind the ears, to the temples, the wings of the nose, &c.; in short, a plan of treatment just the opposite of Professor Alibert's. After the inflammatory disposition has subsided, he advises stimulating lotions. Leeches to the vulva and anus are not to be omitted, when disordered menstruation, or the suppression of bleeding from hemorrhoids, come in for any share as causes. We verily believe there is scarcely a disease, even in the endless nosology of Sauvage, which does not, according to the French writers, occasionally depend on suppressed menstruation or hemorrhoidal discharges. What causes disordered menstruation, produces hemorrhoids, or suppresses hemorrhagies from the hemorrhoidal vessels? English practitioners, perhaps, know this *what*, as imperfectly in many cases as their neighbours; but they, at least, are not so besotted as to regard hemorrhoids and irregular menstruation, but as the consequence of ulterior diseases. A late eminent French writer says the English are profound as political economists, but in medicine they never reason, their practice for the most part being empirical; and yet the French, who are profound in every

thing, are daily attributing apoplexies, pneumonies, and indeed all the gravest diseases, to suppressed menstruation and hemorrhoidal fluxes, and contentedly ordering half a doxen leeches to the anus!

When the acne is complicated with chronic hepatitis, mercury, according to our author, pushed the length of affecting the gums, has a good effect; and emetics and drastic purgatives, when there is torpor of the intestinal canal. But this torpor, says M. Biett, is not feebleness; it is profound chronic irritation; and therefore, every thing in the shape of irritants ought to be rigorously proscribed. In such cases, mucilages, and a severe diet, are the only remedies capable of producing useful effects. We thought here to have heard the voice of the great French medical reformer himself, who, by the way, speaks of emetics and purgatives, as if they were something which, when introduced into the bowels of a man, set to work to pinch, scratch, and tear the mucous membrane, till they convert a slow into an acute and dangerous phlegmasia. We believe there is no purgative in the materia medica, the filings of tin excepted, the action of which is at all to be attributed to its mechanical effects upon the mucous membrane of the intestines. Tartar emetic acts, when introduced into the veins, and the third of a drop of the croton oil is enough, in many cases, to produce purgation. We do not mean here to enter into a defence of purgatives; their utility, we will venture to say, in many diseases is established on firmer bases than even the new physiological medicine; all we mean is, that the French writers proscribe these remedies as if they knew certainly their action, whereas we believe there is hardly a greater mystery in medical science than the mode of their operation.

When M. Biett, therefore, talks of confining the treatment of acne to mucilages and a rigorous diet, on the supposition that a profound chronic irritation exists in the mucous membrane, we are by no means disposed to agree with him. It is true, purgatives may be abused; and we are agreed with M. Biett that drastic ones are very unfit to correct a disordered condition of the digestive system; but it is at least well known in England, if it is yet unknown in France, that purgatives may be given so as to soothe and solicit, not to tease and to irritate; and we believe no English practitioner doubts the utility of such a mode of treatment in most chronic affections of the skin. A wisely regulated diet is of the very first consequence in the prevention of acne and similar affections, as it is an essential, but by no means an only, instrument in the cure. Alibert recommends, that in the acne, the bowels be maintained by laxa-

tives in a state of freedom. Both Biett and Alibert speak highly of the vapour and sulphureous baths—means, the value of which is not yet perhaps sufficiently appreciated in England. M. Biett, however, mentions that the vapour baths have succeeded better with him at the hospital than in private practice, no doubt owing to the apparatus at the hospital being better arranged. The vapours, he says, directed for twelve or fifteen minutes upon the points occupied by the eruption, produce a marked increase in the heat and circulation, which are soon followed by a trickling sweat; a few hours after, the irritated surface is soft and kindly to the touch. Alibert recommends, as external applications, that the eruption be bathed twice or thrice daily, with a solution of the sulphuret of soda and potash, of sufficient strength to stimulate briskly the skin of the face, and as hot as the patient can bear. On going to bed, the eruption is to be covered wiih a pommade of unwashed flowers of sulphur, and this is to be carefully washed off in the morning with water, and the aid of a composition of axunge, rose water, almonds, and a small proportion of Naples soap.

M. BEGIN ON PHYSIOLOGICAL SURGERY.*

It is the opinion of M. Begin, that now the field of medicine is not too vast to be cultivated by one man; and in this we might readily agree with him, if all diseases could be cured by blood-letting and warm water. But though we are afraid that it never will be the lot of medicine to attain to the simplicity of practice which he aims at, and though we cannot allow that the physiological doctrine of Broussais has done all the wonders which he attributes to it, we readily concede to him that facts alone should be the guide of practice; and we agree with him in thinking that surgery is well entitled to all the benefits of the new doctrine. Antiquated theories, indeed, are still prevalent in the best manuals of surgery; and we think with M. Begin, that physiological reasoning should be the base of its pathology and therapeutics, which is just the doctrine of Hunter.

The author has divided surgical diseases into two great classes, the acute and chronic; and to the first he has devoted five, and

* Application de la Doctrine Physiologique a la Chirurgie. Par L. J. Begin, M.D. &c. Paris, 1823. pp. 206.

to the second four chapters of his work. Inflammation, which so peculiarly appertains to surgery, is always, says M. Begin, the effect of some irritating cause. When it is still recent, the fluids, which are collected in the inflamed part, are not yet intimately blended with the organic texture; and after death, by steeping the part in water and frequently washing it, all the extraneous colouring matter may be removed, and the part will attain its original volume and appearance. But if the inflammation is of long standing the same thing will not happen; the extraneous blood cannot be washed out. By some, the first has been called congestion, the second inflammation; but according to our author, both are the consequence of irritation, which in his mind, is the proximate cause of almost all diseases in any way connected with surgery. But the various shades of inflammation should be carefully attended to by the practitioner, and he should be able to distinguish them even in the dead body.

All bodies which are capable of injuring our organs act as very powerful causes of irritation; and this irritation, and the inflammatory action which it occasions, are almost the exclusive causes of danger in every surgical disease and in the operations of surgery; and yet, as is well known, inflammation within due bounds is necessary to the cure of wounds. In the human body there is but one kind of inflammation, differing, indeed, in degrees of intensity, and according to circumstances, productive of various results. Such is a summary of M. Begin's first chapter, in which he has also given a good delineation of the phenomena of inflammation.

In the cure of wounds it is the business of the surgeon to moderate the inflammatory action which must necessarily take place, and to prevent it from being hurtful. This is best done, first, by diminishing the quantity of blood in the inflamed part, as it tends greatly to increase pain and local irritation; secondly, by rendering it more serous by a less nutritive diet; and thirdly, by relaxing the whole animal economy and lessening the excitement of the principal organs. It is also a matter of great moment to moderate sympathies and thus hinder the appearance of some of those severe symptoms which commonly attend them. It is doubtful, how far local blood-letting may be applicable during the first moments of a wound; yet leeches applied immediately after an accident to bruised, swelled, sprained, or fractured parts, or injuries of that nature, have been productive of great advantage; but it is seldom necessary to employ them, except when the injury is extensive or severe, or when the organ of some internal part has been wounded. In simple cases, a solution of nitrate of lead, or cold water, constantly

applied will not only lessen the excitement and pain of the wounded part, but will powerfully moderate irritation. In such cases also, moderate compression has been attended with the best effects, particularly when the bandages have been kept constantly wet with cold water. M. Begin has spoken largely on its mode of action. He assures us also that the solution of muriate of soda, camphorated spirit of wine, and other irritating substances so commonly applied to wounds have done much mischief, whereas cold water has acted always as the best of anodynes. Water applied warm, too, when the inflammation is fairly set in, possesses an emollient property to a great extent, soothing and relaxing the textures, diminishing organic action, and favouring in a powerful manner the removal of inflammation by resolution. In the army, M. Begin has used it with eminent advantage in gun-shot wounds of the hands, or in the neighbourhood of joints.

It is after operation that the surgeon should watch with the utmost care the appearances of inflammation; and when, notwithstanding the rational employment of the means already indicated, violent pain, swelling and redness, have laid hold of the wounded parts, he should again have recourse to blood-letting. In some cases it may be general, but for the most part it will be much better to apply a considerable number of leeches, as near as possible to the wound; and if the inflammation still continues its progress, they must be applied oftener than once; but in this case, instead of using a great number at the same time, it will be much better to apply them successively. In this way we establish a permanent drain of blood in the very neighbourhood of the inflammation, which has a very powerful effect in removing it. M. Demours employs this kind of blood-letting with much success in ophthalmia, or other inflammations of the eye. Our author has adopted the same plan, and always with success, in inflammations of the stomach and bladder, and in those of joints, which have been the consequence of wounds in the neighbourhood of these parts. The number of leeches thus applied, of course, should be proportioned to the magnitude of the disease. In ophthalmia or whitlow, two or three will be sufficient; but in inflammation of the joints, the brain, the bladder, or peritoneum, it often will be necessary that eight, ten, fifteen, or twenty, should remain fixed upon the part; and as one falls off it should be replaced immediately by another: and this practice should be continued, till pain, redness, heat and swelling, be very considerably diminished. M. Begin has frequently observed, that thirty or forty leeches, applied in this manner, had a much better effect than

if they had been put on all at once, or in two or three portions. In addition to local blood-letting we may employ fomentations and emollient poultices, and may use general and local bathing and mucilaginous glysters. The patient may drink plentifully of some diluting liquor, but must abstain entirely, not only from solid food, but even from soup. If these means should unfortunately fail, we must have recourse to the continued use of purgatives in small doses, and we must apply blisters here and there in the neighbourhood of the disorder; but these last are not proper, unless the inflammation be very considerably diminished, and the vessels of the affected parts much emptied by the local blood-letting. Except in cases where the lungs and liver are inflamed, local blood-letting is adequate to the removal of every kind of inflammation. Besides leeches, our author seems to approve highly of opening the veins in the neigbourhood of an inflamed part; and this practice is particularly adapted for the army; only he thinks that it may empty the capillary vessels of the part too quickly, which is never done by leeches. In the wounds of the larger joints, had the good effects of local blood-letting been better known formerly, many limbs might have been saved; and our author assures us, that he could adduce cases of gun-shot wounds in these joints, where not only the limb had been saved by repose and local blood-letting, but even a certain degree of motion of the joint preserved. We have here an interesting case of a wound in the skin, which might have been cured and the limb saved, if the phantom of debility had not terrified the surgeon. In this case, previous to the amputation, where there was violent pain, thirty leeches were applied round the knee, and an emollient poultice laid over their bites to encourage the bleeding, with almost instantaneous benefit. After amputation, likewise, or after tying the large artery of a limb, when the stump, &c. becomes enormously inflamed, topical blood-letting is one of our best remedies; in fact, as it becomes better known, surgical operations will be far seldomer necessary. In wounds of the chest and abdomen, too, it must be extremely useful. Scrofulous affections, cancer, malignant ulcers, white swelling, sarcocele, &c., which in former times required the actual cautery and the knife, have of late been cured radically by its means. The followers of the new doctrine, now-a-days, never witness in their practice those enormous inflammatory swellings, which used to destroy the organization of parts, and render amputation so often necessary. In inflammation of the stomach and intestines, the same practice has also been attended with undeviating success; but to do good, the local blood-letting must be abundant. From

forty to fifty leeches must, in general, be employed at once, when the irritation is severe or deep-seated; and it may be proper to employ that number repeatedly, if the inflammation is obstinate. With some precautions, the same general principles of therapeutics are applicable in the cure of boils, erysipelas, and carbuncles. Now ending this second chapter, the author condemns, and we think, most justly, the following adage of Richerand's, in his Nosographic Chirurgicale, viz. "When general debility is an attendant upon inflammation, do not be afraid that the use of tonics, whatever be its seat, will aggravate the inflammation."

Our author's observations on the manner in which the brain, the stomach, and the heart sympathise with acute external irritations must not detain us long, the phenomena of fever being too well known to need illustration here. These, however, are always more or less intense, according as the internal parts may have previously been diseased or sound. For instance, if the patient be of a bilious habit, and if his chylopœietic organs be naturally very irritable, he will exhibit, at the time of external inflammation, all the appearances usually denominated bilious fever. On the other hand, if he be liable to have much mucous secretion, the sympathetic affection of his stomach and bowels will assume the form of what has been called mucous fever. If either of these be opposed, and consequently aggravated by emetics, purgatives, and bitters, the inflammation (*phlogosis*) of the stomach and bowels may acquire a very great degree of violence, and produce the symptoms of adynamic fever, or the fever of debility; and in an irritable or nervous patient all those perverted actions will be exhibited which are characteristic of the ataxic state. The symptomatic fever is always violent, or otherwise, in proportion to the external injury, or its seat; and this should never be lost sight of by the young surgeon. Besides, if the wounded patient chance to have one organ more sensible, or more irritable than the rest, it is that organ which is most apt to become inflamed on the appearance of the traumatic fever; and thus, after very simple wounds, inflammation of the lungs, the pleura, the liver, the kidneys, the bladder, and the joints, will very readily shew itself, where any of these organs have been previously in an irritable state, and disposed to become inflamed. In an ordinary state, it is the stomach which suffers most; but in whatever organ there may chance to be a superabundance of vitality, that organ may become the centre of sympathetic motions; yet in almost all cases the stomach is first affected.

The first object in the treatment of these internal irritations is to lessen the local inflammation; and here it will be necessary

to employ all those means which we have already indicated, and which we think it quite needless to re-enumerate, as the author has done. But we may observe, that where wounds are hot, swelled, tense, and shining, and where the least pressure is attended with much pain, in consequence, perhaps, of the first dressings having been unskilfully applied, the wound should be laid freely open with the knife, and every foreign or irritating body should be carefully extracted. In fractures, too, the ends of the broken bones should be carefully replaced, as is always done by M. Dupuytren, even though the limb should be much swelled.

The second object is to remove every kind of irritation which may have previously affected any of the viscera; and here, some distinguished surgeons have recommended an emetic. In the cases of many, particularly soldiers, where the bowels have been much loaded, this may be a very proper practice; but our author condemns its indiscriminate employment. And to be useful, the emetic should be administered within twenty-four, or at most, thirty-six hours after the wound has been received; and when its operation is over, the patient should drink plentifully of some mild diluting beverage, in order to dissipate the excitement it has produced. Late in the disease, M. Begin condemns the employment of emetics; and, at all times, when the stomach is the seat of violent irritation, which has extended to the duodenum and liver. In such cases we should apply leeches to the epigastrium; we should interdict all solid aliment; we should use emollient glysters, and baths, and we should make the patient drink freely of acidulated diluting liquors; in fact, we should use every means in our power to remove the irritation, before the sympathetic symptoms show themselves.

The third object is to keep away from the wounded patient all those causes which may possibly excite in him any inward inflammation. It is unnecessary in this place to specify any of these; but, with our author, we may remark, what experience has fully proved, that far fewer wounded men were lost in those hospitals, where nothing could be had but water, bread, wine, and soup, than in those where the richest articles of pharmacy were abundantly supplied. So much has surgery, as well as medicine, had to complain of the abuse of stimulants and tonics. If, unfortunately, in spite of all our care, an internal inflammation cannot be warded off, we must treat it as a primitive affection, and, in whatever organ it is situated, direct against it all the remedies of our art. Among the internal complaints of this kind, our author mentions acute inflammation of the colon as one which produces much havock in hospitals. Whether it

appear in the form of diarrhœa, or true dysentery, it produces always keen irritation in the large intestine, and is for the most part occasioned by the use of bad food. In such cases, the diet should be strictly regulated, and the patient should drink freely of rice water, white decoction, &c.; and if a small quantity of opium be added to those liquids, it will do good, by retarding the peristaltic action of the small intestines, and thus allowing the colon and rectum some repose. The other remedies are mucilaginous glysters and leeches applied to the fundament, in such quantity as the nature of the case and the constitution of the patient may indicate. The author here ends his fourth chapter, with condemning the use of ipecacuanha in the commencement of peritonitis in lying-in women; of emetics, in wounds of the head; of tonics, where external irritation is complicated with debility; and of the most powerful local stimulants, in those imaginary passive inflammations which threaten gangrene.

We are next favoured with M. Begin's remarks on those nervous affections which are the result of acute surgical injuries. Animals undergo wounds with much more tranquillity than man; and frequently the imagination of man makes those wounds mortal which otherwise would not have been so. Even in surgery, therefore, moral medicine may be advantageously employed. The most important nervous affections, attendant on wounds, are stupor, convulsions, tetanus, and traumatic delirium. Stupor is much more rarely met with than is generally imagined, if we except that kind of it which occurs after wounds of the head. In general it is oftener the effect of fear than of a wound. Wine, ether, and aromatic waters, may be given in the first instance; and something warm and gently irritating may be rubbed on the skin; but the stupor being removed, the antiphlogistic regimen must be had recourse to; while we must carefully distinguish stupor from intoxication, and from that general debility which is occasioned by great congestions of blood in wounded viscera; in which cases, stimulants would be injurious. In M. Begin's remarks on convulsions there is little novelty; but we are told that surgeons have committed a great error in supposing that the cause of tetanus is lodged always in the wound. On the contrary, it oftener proceeds from some external cause; and in that case ought to require a very different treatment from what is commonly employed. In consequence of cold striking a suppurating solution of continuity, there may be a real metastasis of irritation to the central parts of the nervous system; and, in proportion as the tetanus is developed, the wound becomes dry, pale, and insensible. The treatment of tetanus must depend on a careful investigation of its causes;

but, at all events, our author approves highly of applying leeches to the temples, to the back of the neck, and the whole length of the spine. He saw a locked jaw, in a soldier at Dresden, relax almost instantly, after blood had been taken away from the temporal artery. Traumatic delirium is really an affection of the brain, of various duration, sometimes ending in a few hours, at other times lasting for some days. It has been opposed by anodyne, antispasmodic, and revulsive medicines, and by blood-letting, pushed so far as to induce fainting; but without any good effect. It has, however, been successfully combated by M. Dupuytren, by means of eight or ten drops of laudanum thrown into the rectum in two or three ounces of any convenient liquid, and repeated four or five times, with an interval of six hours. It almost constantly produces sleep, and restores tranquillity to the patient. Our author speaks highly in favour of this mode of administering opium.

We now proceed, in the sixth chapter, to those local changes which are occasioned by chronic surgical injuries. Cases are thus mentioned which have lasted for some months; and among them we may enumerate suppurating wounds, ulcers, tumours, and those numerous injuries of joints which, under the name of *white swelling*, have been confounded with many other analogous complaints. As they are often consequent to wounds, or acute inflammations, they exhibit all the fundamental phenomena of irritation, such as pain, swelling, suppuration, &c. Among all these maladies, our author directs his attention principally to scrofula, chronic inflammation of the joints, and cancer, as the theories concerning them have hitherto led to an inconvenient, and not a very efficacious practice.

In scrofula, or the lymphatic temperature, the white textures seem to have completely obtained the mastery over those organs which are almost exclusively animated by blood, as the muscles; and the lymphatic system is in full energy while sanguification is imperfect and languishing. That disease, then, consists in a greater or less degree of irritation in the lymphatic vessels and glands; and M. Begin is disposed to give it the name of ganglionitis, instead of sub-inflammation, as it was named by M. Broussais. The lymphatic glands often become hot and painful, and the redness of their texture is propagated to the skin which covers them; but should there be little pain and heat in these swellings, and no discolouration of the skin, are we to conclude that the *nature* of the disease is changed? Certainly not; for at its commencement the swelling exhibited evident marks of irritation, which may at any time be removed by the application of irritating substances, and which reappear

spontaneously after a longer or shorter period, when the tumour becomes soft and is converted into an abscess. The greater number of the inflammations of internal lymphatic glands depend upon an inflammatory irritation of the mucous membranes, upon which the lymphatic vessels going to the affected organs, open. The inflammation of external glands depends upon analagous causes. In consequence of irritation of the scalp, the glands of the neck swell; and if the patient be eminently lymphatic, the swelling will last for some time; and should it become chronic, it receives, long after the cause which produced it has ceased to act, the unmeaning and barbarous name of scrofula. Its origin is misunderstood, and it is treated in the most irrational and empiric manner, though inflammatory irritation is still present with it, as at first.

Our author ridicules the absurd theories which have prevailed for so long a time concerning white swelling, and similar affections of the joints. Study, he says, the causes, examine the commencement, trace the progress of injuries of the joints, and you will be convinced that they proceed from an inflammation, more or less active, of the affected parts. At first acute, and occasioned by external violence, it has become permanently chronic; fixed at first upon those textures which surround or form the joint, it has gradually extended to the rest, and has at length finished its career with completely disorganizing every part of the joint. The inflammation, first of all, may attack the cellulo-fibrous texture which covers the joints, and then, in succession, the articular ligaments, the periosteum of the ends of the bones, the synovial membrane, the cartilages, and the bones. Dissection of the dead parts will shew considerable varieties in all these; but the effects of inflammatory irritation may be traced in every one of them.

Nearly all cancerous tumours, says our author, have originally proceeded from external violence, directed against the seat of cancer. The inflammation which succeeded it, has been but imperfectly removed, and has been followed by a circumscribed moveable tumour, more or less solid and painful, which shews that a piece of texture, more severely injured than the rest, has remained irritable after the surrounding parts had all returned to their natural state. If this remaining irritation be properly treated, the cure will be complete; but if it be neglected, or what is worse, if irritating substances be applied to the tumour, it increases rapidly; and in proportion to its excitement, fluids are directed to it in greater quantity, and its size becomes considerable. The irritation continues its progress, and a yellow serosity, or a white pulpous matter is infiltrated throughout the

tumour; cells appear to be dug out in its texture, and the latter, compressed on all sides, is at length obliterated; the tumour being now converted into a pultaceous mass, resembling brain or some other substance. Transformations of this nature proceed invariably from the center to the circumference, and increase of disorganization is followed by increase of pain. M. Begin will not allow that the *spontaneous* developement of cancer is possible. In treating this subject he displays considerable ingenuity, but we cannot enter on it farther.

The author now enters, in his seventh chapter, on the treatment of these chronic complaints; the chief part of which consists in the removal of irritation. He denies that there is such a thing in nature as an atonic ulcer; yet he allows that there are ulcers which require both external stimulants and internal tonics, that they may assume that healthy action so necessary to their cure. But, he observes, solutions of continuity, which have been long kept open by irritating dressing, and whose edges are in a state of chronic inflammation, and quite callous, are cured with astonishing rapidity by means of emollient applications and local blood-letting with leeches. In such cases, as is well known, compression is of essential service. Herpes, tinea, and other cutaneous affections depend upon irritation of the sebaceous glands and perspiratory vessels of the skin, and many of them are much exasperated by the very remedies employed to cure them.

The physiological doctrine often throws light upon circumstances where the ancient systems left the practitioner in darkness and without a guide. Here M. Begin gives the case of a young girl, who had for a long time exhaled from her nostrils a most disgusting odour, and who was supposed, by some physicians, to have ulcers either in the bronchia or lungs. He found out, however, that the mucous membrane of the nose was in a state of chronic inflammation; and by means of leeches and emollient fumigations, directed into the cavities of the nose, and a variety of emulsive remedies, he cured this young person in ten weeks. The complaint had previously lasted for several years, and had resisted a variety of stimulant remedies. Even fistula may be sometimes radically cured by a local antiphlogistic treatment, if it be employed methodically and with due perseverance. The same mode of cure will frequently be efficacious in caries of the bones, and in diseases which has been too often treated by local stimulants. These, indeed, are sometimes necessary, and the diseased parts have, at times, been much benefitted by having aromatic vapours pumped upon them. They seem to produce an irritation different from that

which kept up the causes, and which is favourable to the cure. But in general, emollient applications answer best.

In external scrofulous affections, when the tumours become pale, indolent, and stationary, it is customary to cover them with stimulating plasters; but these invariably increase irritation, and hasten the very evils which it is meant they should prevent.

I have seen, says M. Begin, chronically inflamed glands which had obstinately resisted very active solvents, and the most powerful tonics, give way, as if by enchantment, under the continued use of leeches and emollient poultices. Such, indeed, ought to be the cure in all those cases, vulgarly termed, scrofula; but this will not prevent us from using internal means, if the digestive organs are sound, such as a good nourishing diet, and every other means capable of exciting the energy of the sanguineous system, or of distributing the vital motions equally through the body.

Chronic diseases of the joints require local blood-letting, the absolute rest of the affected part, baths, and emollient applications. In diseases of the knee, M. Bouchet of Lyons has obtained the most unexpected success from rest alone. When the irritation is fairly removed, blisters, moxa, and caustic issues will be of service; but applied sooner, they will infallibly do mischief. Emollient poultices are hurtful, when there is an indolent swelling of the external parts. When pain and heat are entirely removed, we have a pretty clear proof that irritation is removed also; and then we may have recourse to stimulants and tonics. It may be here observed, that if we apply the antiphlogistic regimen with due energy to wounded or bruised joints, chronic inflammation of such parts will become much more rare.

The physiological doctrine has already done much good, says M. Begin, in the treatment of cancer; for if we examine the irritation which produced it, even that disease may be cured. It must be allowed, however, that the longer the irritation has lasted, the more difficult is it to make those organic changes disappear which it had produced; nay, it is frequently impossible. Cases are brought forward in which cancerous affections, of many years standing, had given way to antiphlogistics and local blood-letting; the latter, by means of leeches, to a great extent. The diet, in these cases, consisted of vegetables, particularly carrots, milk, and dishes prepared with milk; coffee, wine, and every kind of spirituous liquors, were forbidden. Every day the patient was ordered to take from three to eighteen ounces of sea water. Hemlock plasters were applied to the tumours, dry friction was used over every part of the skin, and the patient was directed to take moderate exercise. After the application

of leeches, poultices of crumb of bread, and decoction of mallows and night-shade, were laid over the part to encourage the flow of blood. To keep the bowels in a state of regularity, pills of hemlock, rhubarb, and aloes were administered, which, with the sea water, sometimes occasioned a considerable purging; but as in many of these cases there is materially much irritation in the alimentary canal, purging is decidedly improper. Hemlock does not appear to be a favourite of our author's; it is too irritating, and does not deserve the praises bestowed upon it by the admirers of Stoerck. M. Begin cites a case where a tumour in the left breast, as large as a goose's egg, and which had all the pains attendant on cancer, was removed in four months, principally by the antiphlogistic regimen. The patient, besides, had many symptoms of pulmonary consumption. No less than a hundred and twenty leeches were applied at very short intervals, the warm bath was also used, and an emollient poultice applied to the tumour. His diet consisted of broth, milk, rice, and the like. Diseases of the ovaries, scrotum, testicle, &c., have all given way to the above treatment. Undoubtedly, says our author, when glandular and cellular tumours shall be more methodically treated at their commencement, the number of cancers will be diminished. Even corrosive cancerous ulcers may be benefitted by this treatment; and M. Begin has given two cases to illustrate that point.

Our author now enters in his eighth chapter on the sympathetic phenomena which are occasioned by external chronic irritation. If such irritation has existed for a long time, it disposes every part of the body, but in an especial manner those which are more peculiarly connected with it by sympathy, to contract a similar irritation, which will be followed by the same results. If this tendency should not spontaneously exist, a very slight external cause will impart it; thus, if a person have white swellings in one joint, a very slight blow will be sufficient to excite the same disorder in some other. Speaking of the effect of external irritations on the principal organs of the animal economy, our author gives a very accurate picture of the hectic state, which is rapid or tedious in its progress, according to the constitution of the individual attacked by it. The sympathetic irritation may lay hold of some internal organ, as the lungs, liver, spleen, kidneys, &c., but its steps are nevertheless directed to the alimentary canal; for after death we always observe the marks of inflammation in the stomach or intestines. If, when a limb is cut off for white swelling, even at an early period, there exist an internal irritation, it will continue after the operation, and make progress; for the acute inflammation,

and traumatic fever which follow the operation, instead of removing it, give it additional strength. Perhaps the sudden removal of a source of suppuration, which had lasted for a long time, may dispose the system to go on furnishing a similar secretion elsewhere. M. Begin next enumerates the post mortem appearances, which are the consequence of sympathetic irritation.

Entering now, in his ninth chapter, on the treatment of the sympathetic phenomena we have just been considering, M. Begin condemns altogether the remedies which have hitherto been administered in such cases. According to him, indeed, this part of the healing art has long been the prey of the Brunonian system, and in consequence many lives have been lost. Many fatal results have also followed the hasty decisions of those practitioners who pretend to know every thing intuitively, and too often decide wrong. Many have also done harm by postponing the amputation of external diseased parts, till a patient is reduced to a state of great debility; for such parts should be instantly amputated, as soon as the disease is declared to be incurable without an operation; at least this is the best way to prevent internal irritations, which otherwise would certainly prove fatal. If inflammatory irritation of the stomach and bowels make its appearance, its progress may be retarded by the application of emollient fomentations to the abdomen, and the internal use of mucilaginous liquid. The diet should be very low, and leeches should be applied over the seat of pain, and repeated as often as circumstances shall require them, or as the strength of the patient may permit. Should diarrhœa shew itself, all we can do is to give food which nourishes, in small bulk, and furnishes little excrement; such as rice, arrow root, &c. If, notwithstanding all our efforts, the patient appear to be fast sinking, we may allow the use of internal tonics, merely to support life as long as possible. When other internal organs are affected, nearly the same treatment is requisite. Our author now makes some judicious observations on the duties of the surgeons previous to and after operations, and on the reproduction of cancer; and in these we notice the same leaning to the antiphlogistic regimen.

We have thus finished our analysis of M. Begin's work; and in order to do it justice, we have been under the necessity of mentioning several things, which must be well known to the English surgeon. Many of his remarks are well worth attending to, and many of his practical inferences we have ourselves verified. But the reader, we fear, must not take every thing as proved which he has said about cancer; nor ought he to

agree with him implicitly in the anathema which he has pronounced against the internal use of tonics. Even our analysis will shew that the work is not only diffuse, but that it abounds with repetitions.

Scarpa on Hydrocele of the Spermatic Cord.

After a short sketch of the history of this form of disease, which may be safely passed over as unimportant, Professor Scarpa states that he has observed, notwithstanding the description of Wiseman, Bertrandi, Monro, and Pott, a want of information on this point for the purposes of practical surgery, and having in his possession a number of anatomico-pathological preparations, he felt it would be useful to give a correct account of the nature of the disease and of the state of the parts affected.

In his treatise on hernia, Professor Scarpa shewed that the cellular structure, placed behind the bag of the peritoneum, surrounds the spermatic vessels, passes with them through the inguinal ring, and accompanies them to their insertion into the testicle. He also shewed that the spermatic vessels, their cellular sheath, and the tunica vaginalis are surrounded and enclosed by the musculo-aponeurotic sheath of the cremaster.—As in common inguinal hernia, the hernial sac, in its progress downwards, follows the course of the cellular covering of the spermatic cord, so also in the case of effusion of serum, into the cellular structure surrounding the cord, the fluid passing from cell to cell, fills and enlarges the cord, some times in its whole extent from the loins to the scrotum, at others from the inguinal ring to the insertion of the vessels into the testicle. This form of disease, from the state in which the fluid exists, has received the name of the diffused hydrocele of the spermatic cord.

When this disease is examined anatomically, the parts present themselves in the following order. Under the skin and the dartos is found the musculo-aponeurotic sheath of the cremaster, its size and compactness varying according to the duration and bulk of the disease. Under this is found the cellular covering of the cord, thickened, tumid with fluid, and at first sight not unlike a hernial sac. When cut into, much serum escapes from

* Memoria sull' Idrocele del Cordone Spermatico di Antonio Scarpa, Professore Emerito, e Direttore della Facolta Medica nell' I. R. Universita di Pavia. Pavia, 1823. 4to.

it, the tumour sinks and disappears more or less perfectly. The fluid having escaped, the spermatic vessels become visible, having been previously hid by the tumid cellular mass. The cells of this mass, which in their natural condition are scarcely visible to the naked eye in the state of disease, are converted into vesicles containing fluid, and some of them sufficiently large to admit the point of the finger. When the tumour of the scrotum is of a large size, and of long duration, the structure is somewhat different, for, in proportion as we approach the bottom, the cells become more delicate, and at last disappear at the lowest part, which presents one large cavity filled with fluid. From this cause, in the diffused hydrocele of the cord the fluctuation is clearly discernible at the lowest part of the tumour. Professor Scarpa attributes this change to the gravitation of the fluid pressing the cells together, distending them, and favouring their adhesions. The serum contained in the cells is commonly thin and limpid, occasionally yellow, albuminous, or gelatinous.

The base of a diffused hydrocele of the cord, however large or old it may be, corresponds to the point at which the spermatic vessels are inserted into the testicle, or at most, the tumour extends a very little behind the testicle. Between the gland and the base of the tumour is interposed a semicircular sulcus, which varies in depth and extent.

If the tunica vaginalis be opened when a diffused hydrocele of the cord is present, a dense septum may be felt at its inner and lower part, preventing any communication between this sac and the base of the tumour,

On the first appearance of the diffused hydrocele, its form is nearly cylindrical, but afterwards becomes pyramidal. However large it may be, the penis never appears so much retracted under the integuments of the pubes as in a hydrocele of the tunica vaginalis of the same volume. The diffused hydrocele is little if at all sensible, and yields to the finger as a vesicular body filled with fluid, though not altogether without elasticity. When the lower part is compressed, the fluid recedes towards the groin but slowly and with difficulty, whilst in the hydrocele of the tunica vaginalis an equal degree of pressure, at once forces the fluid to the apex of the tumour, and distends it. The testicle may be felt in its natural position under the hydrocele of the cord; in the hydrocele of the tunica vaginalis this is impossible, and in this circumstance consists the most certain means of forming a diagnosis between the diffused hydrocele of the spermatic cord and the hydrocele of the tunica vaginalis.

When the diffused hydrocele of the cord enters and dilates the inguinal ring, it is with difficulty to be distinguished from an

omental hernia. In both cases the tumour has at first a cylindrical shape, and afterwards becomes pyramidal; both kinds of tumour are soft and flexible; both little if at all sensible, and both with difficulty entirely reduced. The doubts are increased, if, as in the case mentioned by Pipelet (Mem. Acad. Chir. 3.), the portion of the protruded omentum is converted into hydatids, or a mass of vesicles filled with fluid, which is precisely the condition of the diffused hydrocele on its first appearance. Nor, according to the experience of Professor Scarpa, can a diagnosis be drawn, as some have proposed, from the circumstance that an omental hernia does not re-appear when the patient is kept in a horizontal position after its reduction: in some instances, when the hernia was small, he has seen the contrary, whether that the hernia had only been returned into the inguinal canal, or that having been completely reduced, it was again drawn down by some adhesion which it had formed with the hernial sac.

The diffused hydrocele of the spermatic cord is sometimes accompanied by a hydrocele of the tunica vaginalis. In this case the form of the scrotum is less regular than in the simpler one. The size of the neck of the tumour is considerable, and accompanied by a great dilatation of the inguinal ring. The hydrocele of the tunica vaginalis is anterior, and descends lower in the scrotum than that of the cord, which is posterior and somewhat inclined to the outer margin of the scrotum. A sulcus is interposed between them, which passes obliquely over the front of the scrotum in different situations, according as the tunica vaginalis is more or less distended. Besides, as in common cases of hydrocele of the tunica vaginalis, the testicle cannot be seen or felt at the bottom of the scrotum. These symptoms are generally sufficient to prove the existence of this complication, but if any doubts remain the surgeon may satisfy himself by puncturing the anterior tumour, in which case the tunica vaginalis being emptied, the presence of the diffused hydrocele of the cord becomes evident.

In his treatise on hernia, Professor Scarpa has mentioned a peculiar congenital formation of the tunica vaginalis, which, when the sac is distended by fluid, may give the appearance of two distinct tumours on the front of the scrotum, separated by a sulcus. The appearance, however, is deceptive; and the case may be distinguished from the complication of hydrocele of the tunica vaginalis, with diffused hydrocele of the cord, by the situation of the sulcus, which is nearly in the middle of the swelling, by the effect of pressure, which communicates an impulse to both portions, and by a puncture in the lower part, which empties both by a continued uniform jet.

Hitherto we have spoken of the nature and symptoms of the *diffused* hydrocele of the cord, as well simple as complicated, with hydrocele of the tunica vaginalis. It does not, however, always happen that the serum effused into the cellular structure of the cord passes from cell to cell, so as to occupy its whole extent; it is occasionally confined to a small number of them in different situations between the inguinal ring and the testicle. In the course of time this circumscribed collection of fluid is firmly enclosed by a compact sac, somewhat similar to the covering of an encysted tumour; hence this form of disease has received the name of the encysted hydrocele of the cord.

The encysted hydrocele occurs not only in the cellular structure of the spermatic cord, but also, in females, in that which surrounds the round ligament of the uterus, and accompanies it through the inguinal ring.

When placed immediately above the testicle, the encysted hydrocele is commonly of an oval shape. Whilst of a small size, although it at first appears to be confounded with the testicle, yet a careful examination shows that they are distinct, unless the testicle should happen to be enlarged. The diagnosis is not so easy when the encysted hydrocele is of considerable bulk, principally because the testicle is, as it were, buried in the tumour; seldom, however, so much so as to escape the detection of a practised hand. For which reason, if that portion of the tumour which projects forwards, and somewhat laterally at the bottom of the tumour, be softish, yielding, smooth, and very sensible on pressure, whilst the remainder of the swelling presents the characters of a collection of fluid, we may be assured that the first and smaller portion is the testicle in its healthy state, and the remainder an encysted hydrocele of the cord. The mass may be distinguished from scirrhus of the testicle by its consistence, smoothness, and the absence of pain.

The cyst of such a tumour is formed of two layers, first the musculo-aponeurotic sheath of the cremaster, and under it the cellular structure of the cord, more or less thickened. Its outer surface presents arterial and venous branches from the neighbouring vessels. The inner surface is irregular, fringed, and in some parts villous, probably from the remains of the cellular structure in which the tumour formed. The pressure of the encysted hydrocele on the testicle, has commonly the effect of pushing it a little lower in the scrotum than natural, and somewhat forwards. Professor Scarpa found it in one case, however, atrophic, and adherent to the tunica vaginalis, without being able to ascertain whether the encysted hydrocele, or the wasting of the gland, had been the primary disease.

At other times the encysted hydrocele is situated at a variable distance above the testicle. It then, at first, presents the appearance of a small varicose knot on the spermatic cord, and gradually increases to the size of a pigeon's egg. Tumours of this kind have probably given rise to the supposition of the presence of a third testicle—a monstrosity, as Professor Scarpa remarks, existing only in imagination. When seated above the testicle, the encysted hydrocele is moveable in all directions, as though it hung by a pedicle, and when moved or pushed upwards, it elevates and carries the gland with it. Although somewhat painful, on its first appearance, by the time it has reached the size of a nut, it ceases to cause any inconvenience, unless, indeed, together with the spermatic vessels, it be strongly compressed in making an examination. Its distance from the testicle constantly varies, being dependent on the variable contraction of the testicle and corrugation of the scrotum. The cyst is composed of two layers, viz. the musculo-aponeurotic sheath of the cremaster, and the cellular structure of the cord, rendered more dense and compact than could be conceived. The inner surface is irregular and villous; the secreted fluid is for the most part limpid, albuminous serum, but sometimes darker and more consistent.

The treatment of both forms of the disease is very simple. Professor Scarpa recommends that an incision should be made, the fluid evacuated, the wound filled with charpie, and allowed to heal by granulation. In the case of a large diffused hydrocele, especially when complicated with constitutional disease, more caution is required; the inflammation succeeding, an extensive incision may terminate fatally, as Pott and Professor Scarpa have experienced. It is possible that the encysted hydrocele might be cured by a simple puncture, or by the use of an injection, as in hydrocele of the tunica vaginalis. A small encysted hydrocele might be extirpated, and the wound healed by the first intention.

The Memoir, which is illustrated by two good plates, containing representations of the forms and coverings of the two kinds of hydrocele, includes five or six cases, which, however, are not so essential or so peculiar as to render it necessary to transcribe them.

M. TACHERON'S PRACTICAL PATHOLOGY. *

The importance of pathological anatomy to the study of practical medicine is too generally admitted at the present day, to render it necessary to adduce many arguments to prove their close connection and mutual dependence. We say that the dependence is mutual, because we believe, that great as the errors were, which were formerly received in the practice of physic from neglecting the information to be derived from the examination of bodies, we are threatened with others equally serious from an overstrained attention to pathological anatomy exclusively, and without an adequate regard to the results of observation of symptoms during the course of disease. In short, we fear that whilst we accumulate an almost interminable catalogue of morbid appearances, presenting minute and unimportant distinctions, we shall more or less lose sight of the condition or cause which preceded or produced them. These remarks are particularly applicable to the French school, the great merit of which, in this part of our science, we have however no intention to dispute. They have, in fact, in many parts of the body, so far deceived themselves, as to form distinct and independent diseases grounded on changes of structure, which are doubtless distinguishable in appearance, though, in the majority of cases, they may be clearly shewn to be modifications merely of the effects produced by the operation of common and well known processes. It is in vain to say that these fine drawn distinctions have not any influence in practice; the case is notoriously the contrary; and to the operation of this cause, as much as to any other circumstance, are we inclined to attribute the proverbial inertness and insufficiency of the French practical medicine. To give an example, and that a striking one, let us look at the paper of M. Bayle, (perhaps the best anatomico-pathological writer of the school of Paris) on Œdema of the Larynx, (*Vide Quart. Jour.* Vol. 2. p. 231.) Is it not evident that in giving that name to the affection in question he must have been guided rather by the result of inspection after death, than by the observation of symptoms during life, which, erroneously as he viewed the question, could not altogether escape his penetration? (*Vide* Op. Cit. pp. 232-3.) Who, in the name that he has given to it, or even in

* Recherches Anatomico-Pathologiques sur la Médecine Pratique, &c.. par C. F. Tracheron, M.D., &c. &c. 3 vols. 8vo. Paris 1823.

his opinions of its nature, could recognize one of the most formidable diseases we are acquainted with, rapid in its progress, fatal if unchecked or improperly treated, and differing *toto cælo* from every thing that we understand by the term œdema? What, we would ask, would be the consequence of a treatment corresponding to the idea this word conveys? It is needless to answer the question, and the best that could be hoped is that the practitioner, unfortunate enough to be deluded by a name, might dearly purchase experience and information for the future. What we say of M. Bayle might with equal justice be said of others, and of none more so than M. Laennec, of whose ingenious inventions and diligent researches so much has been said, and that deservedly.

Thanks, however, to M. Broussais and his followers—whose opinions are gaining ground, and insinuate themselves unconsciously into the arguments of even his most determined opponents, French practitioners begin to entertain more correct ideas on this and similar matters. It must be allowed that he has brought about, if not a total revolution, at least great and fundamental modifications in the principles which regulate the conduct of practitioners in his country. That the change is for the better, who will deny? Of its reality we are not to judge by the creeds of the schools, but rather by its influence on the conduct of individuals. When, indeed, was a school found to admit with candour and facility the most obvious correction of erroneous principles, or impugnment of false facts? It is an error to suppose that schools give the impulse to the progress of science; the case is just the reverse: they do not lead, but follow; and that at a long interval, reluctantly, and casting "many a longing, lingering look behind."

But have we forgotten M. Tacheron? or rather, have we by this recital of wrongs and grievance, prepared our readers to join us in falling on his guilty head in the full fury of just indignation? In truth neither—we proceed to notice his book, and the little that we intend to say of it is in decided commendation of the plan and manner of its execution. He has done that which it would be well that all should do—he has combined the study of pathological anatomy with the attentive observation and description of symptoms, a combination which renders both valuable, when they would otherwise have been useless, or even prejudicial.

The treatise is but little calculated for the purpose of minute analysis. It consists in a detail of cases and dissections, illustrating the nature and treatment of some of the most common and important diseases, together with occasional remarks, sug-

gested by the circumstances presenting themselves in individual instances. These cases are not, however, such as we occasionally meet with, resting on the authority of an individual, and more or less distorted by the wish of proving or disproving particular doctrines; on the contrary, they consist almost exclusively of the records of the clinical school of the Faculty of Medicine, of Paris, originally proposed and superintended by the celebrated Corvisart. The observations collected by the students, in such an institution, under the eye of an able master, have a character of truth and precision, which it is almost in vain to look for from any other quarter, and cannot fail to exert a marked, though indirect influence on the science of medicine.

In his preface, M. Tacheron gives a list of the names of the students of the clinical school of medicine since its first establishment, many of whom are now well known by the success and assiduity with which they cultivate the different branches of the profession. Most of these names, too, are to be found in the body of the book, as reporting the numerous observations of which it is composed. The plan of the work arose from the suggestion of M. Hallé, in a report to the Faculty of Medicine, a suggestion which the author adopted. "Placed," says he, "for two years in this hospital, I began to take notes of the important facts which constantly presented themselves, and to mark subjects needing investigation; and by the kindness of M. Leroux, I was subsequently enabled to complete the number of observations, by extracts from the records of the Institution."

We proceed to say a few words on the arrangement of the diseases treated of, by much the worst part of the work; it is, in fact, founded on the opinions of M. Broussais, is almost unintelligible, and sets all nosological system at defiance. It is true, that it is sufficiently simple in its appearance—it corresponds to the fundamental axiom of the new doctrine, that every disease, however different its appearance, its symptoms, or the texture in which it originates, is "*une phlegmasie;*" in a word, that fevers, phlegmon, scrofula, scirrhus, cancer—all are inflammations. Thus, in the book before us, under the head of Cutaneous Inflammations, are jumbled together the exanthemata, small-pox, measles, and scarlet fever, with erysipelas, which includes urticaria and aphtha, and with dartres. The second order of phlegmasiæ is that of mucous membranes, comprehending ophthalmia, coryza, cynanche tonsillaris, and trachealis, pertussis, convulsive asthma, asphyxia, pulmonary catarrh, hæmoptysis, gastritis, including scirrhus and cancer of the stomach, hæmatemesis, gastro-intestinal phlegmasiæ, which

correspond in their different degrees to the diseases which M. Pinel has named bilious fevers, adynamic fevers, and ataxic fevers, enteritis, comprising diarrhœa, dysentery, scirrhus, and cancer of the intestines, catarrh of the bladder; and lastly, catarrh of the uterus and vagina, a subject on which M. Tacheron intends to publish at a future period.

The third order is that of phlegmasiæ of serous membranes, viz. arachnoiditis, hydrocephalus, pleurisy, hydrothorax, pericarditis, and peritonitis.

The fourth order is formed by the phlegmasiæ of parenchymatous organs, and includes organic affections of the brain, as suppuration, cancer, tubercles; pressure on the brain, as in apoplexy, convulsions, and *tetanus;* hysteria, epilepsy, chorea, catalepsy, and hydrophobia.

This catalogue, we believe with most of our readers, will justify us in the judgment we have given of the new French doctrine, at least in a nosological point of view. That the system of M. Pinel was sufficiently artificial, inconsistent with nature and with itself, must be allowed; but it falls very far short of the extravagance and absurdity of this modern attempt at ultra-simplification of an obscure and difficult subject. Whatever the merits of M. Broussais may be in a practical point of view (and he really deserves great credit for the reformation which he has effected among his countrymen), he must, if he wishes his opinions to be generally known to strangers and to posterity, considerably modify some of his attempts at undiscerning innovation, and reduce his arrangement of diseases to something a little more systematic and rational than the specimen above exhibited.

Contrary to our usual practice, we have not made any attempt to exhibit a condensed analysis of the contents of M. Tacheron's book: from what has been already stated of its nature, the reason must be sufficiently obvious. What advantages could be expected from extracting the details of interesting cases in a mutilated and contracted form? Or what interest in transcribing observations referring to individual histories?

Notwithstanding the imperfections which we have noticed, this book is a good one, and to those who would wish to acquire an acquaintance with the practice of French physicians in most diseases, must be highly interesting. It must be remembered, that though arranged on the foundation of M. Broussais' system, the cases were observed, recorded and treated, under the inspection of the greatest practitioners of the old school, Corvisart, Leroux, &c. As a disciple or partisan of the new one, M. Tacheron pretty freely points out and reprobates the inadequacy,

and even danger of the mode of treatment formerly employed, and contrasts its consequences with the more rational ones at present adopted in France. We shall conclude our notice by saying, that those who at once study and observe will be gratified by the perusal of M. Tacheron's book.

SEILER AND OTHERS ON THE TEMPORARY LIGATURE OF ARTERIES. *

We have, on several occasions, in some late numbers of this Journal, called the attention of our countrymen to the numerous cases published in recommendation of Scarpa's plan for the temporary ligature of arteries. We believe, however, that the essays and cases to be noticed in this article justify us in again devoting a short space to the subject, and the more so as we perceive that by our contemporaries in general it has been almost overlooked.

The treatise of M. Seiler consists, in the first place, of a German translation of the letters of Professor Scarpa and Vacca-Berlinghieri on the ligature of the larger arteries, and in the second, of a series of experiments which he performed for the purpose of deciding on the merits of their different opinions, and particularly on the principal point disputed, namely, whether in the case of an artery tied with a flat ligature and a cylinder, there be a risk of its laceration by the ligature or by suppuration, and of consequent hemorrhage, notwithstanding the ligature should have been removed on the fourth day. The experiments of M. Seiler lead him to answer this question in the negative, and to favour the proposal of Scarpa.

He concludes, from his experiments on men and animals—

* Sammlung einiger Abhandlungen von Scarpa, Vacca-Berlinghieri, und Uccelli, ueber die Pulsader-geschwulste, &c. Von Wilhelm Seiler M. und C.D. &c. &c. Zurich, 1822.

2. Lettera del Professore Scarpa al Dettore Omodei sulla legature temporaria, &c. (Omodei. Annali. No. 75 Margo, 1823.)

3. Appendice alla lettera del Professore Scarpa; &c. (Omodei Annali. No. 76, Aprile 1823.)

4. Solera. Caso di aneurisma operato calla legatura temporaria. (Omodei Annali, No 68, Agosto, 1822.)

5, Manzoni, Storia di un'aneurisma operata colla legature, &c. (Omodei. Annali. No. 73, Gennaio, 1823.)

6. Odone. Storia di legatura temporaria dell'arteria radicale. (Omodei. Annali. No. 75. Margo, 1823.)

1st, That the closure of arteries occurs with nearly equal stability and perfection, whether the coats be preserved entire by the use of the flat ligature and cylinder, or whether the two inner ones be lacerated by the employment of the round ligature.

2d, That if the ligature be removed on the fourth day, the coats of the artery remain entire, provided they be of the usual size and thickness, have not been too tightly tied, and not unnecessarily detached from the surrounding parts.

3d, That the possibility of preserving the coats of the vessel entire, affords a great security in the treatment of aneurism, from their being frequently diseased.

4th, That the possibility of removing the ligature is equally advantageous, not only by diminishing the suppuration, but also by lessening the risk of inflammation extending to the heart. The experiments of M. Seiler, at least on arteries of equal size with those of the human body, do not confirm the assertion of Professor Vacca, that the vessel is divided by the progress of ulceration, even though the ligature be removed. In dogs, he confesses that the assertion is correct. In other animals, on the contrary, he found the surface of the artery covered with granulations, and confounded with the surrounding parts. He states, that the arteries of dogs are more easily lacerated than those of the human subject, and of other animals, and that they may be divided by the tightening of a round ligature; can he be ignorant that this is the case in man also?

5th, That there is no foundation for the objection made to Scarpa's process, that of causing irritation in the wound, as the size of the cylinder is insufficient for that purpose.

6th, That occasionally the coats of arteries are so yielding as to be divided by the application of a round ligature; and that in such instances Scarpa's plan with the cylinder and flat ligature certainly prevents the laceration. His observations on the mode in which an artery is obliterated, agree in general with the statements of Dr. Jones, except that he has not always found the vessel closed from the point of ligature to the origin of the nearest branch; he has, on the contrary, occasionally observed the continuity of the artery interrupted by a simple cicatrix, corresponding to the spot at which the ligature was applied.

7th, That the arguments and facts in favour of Scarpa's method justify us in continuing to employ it, and to consider it as the most likely means of bringing the Hunterian operation to perfection.

The object of Professor Scarpa's letter to Dr. Omodei is to recommend the employment of an apparatus, which he has invented for removing the ligature at the end of a few days, with-

out any danger of disturbing the wound or injuring the coats of the artery, which were, in fact, among some of the strongest objections urged against his operation by its opponents, and particularly as the means hitherto recommended for that purpose by Roberts and Giuntini, viz. a thread placed between the ligature and the artery, as practised by the former, or attached to the cylinder as by the latter, did not remove the necessity of lacerating the wound by the introduction of the finger.

The apparatus consists of two simple instruments, of which the first is a grooved director. Within the groove, common to instruments of the same description, it presents another, which is merely an angular fossa, and is just capable of receiving the edge or point of a knife. For the extent of nearly an inch at the lower end of the instrument there is a narrow longitudinal fissure, open below, and continuous above with the line of the narrow groove. Two rings are attached horizontally to one side of the instrument, their diameter being proportioned to the size of the ligature on the artery.

The second instrument consists in a scalpel, with a convex cutting edge, its length not exceeding five lines, and so thin as to pass easily into the narrow fissure at the bottom of the grooved director. The point is blunted so as to move readily upwards and downwards in the narrow groove of the sound, and at the base of the blade is a bar or impediment, which prevents the knife from passing above a certain distance through the fissure at the bottom of the director.

When it is intended to remove the ligature, the instruments are employed in the following manner. The end of the ligature hanging out of the wound is passed first through the lower, and then through the upper ring of the director. The ligature is next moderately tightened, and the director introduced along it to the bottom of the wound, so as to be in contact with the cylinder on the artery. To keep it in that position the ligature is twisted round the top of the director which has a projection for the purpose. The director being so placed that the fissure in it corresponds to the course of the artery, is to be held in one hand, whilst the operator takes the knife in the other, and passes it perpendicularly into the wound along the groove, and by that means into the fissure of the director, the ligature on the artery then lying transversely below it. The operator then by a slight pressure and motion of the knife edge, divides the ligature on the cylinder, and makes himself assured of it by finding the other end of the ligature yield.

In his experiments on animals, Professor Scarpa has found that the ligature could be removed with the greatest ease and

safety, even when seated at a considerable depth from the surface, and that without any extensive disturbance of the wound, which may be healed by the first intention. From these facts he concludes that there can be no doubt of its affording the same advantages in the human subject.

The appendix to the letter consists in a short notice of the experiments of M. Seiler, and in an announcement that the Museum of the hospital of Sta. Maria, at Florence, contains a specimen of the condition of an artery, at some distance of time after its obliteration by the temporary ligature. The preparation is the arm of a young woman, in whom Prof. Guintini tied the brachial artery with the temporary ligature, (*Vide Quart. Journ.* Vol. 4. p. 23.) and who died a few months afterwards of a chronic disease. At the point of ligature the artery is contracted, obliterated, and almost ligamentous, but preserves a manifest continuity with the tube of the vessel above and below. He concludes therefore, that it is impossible that the continuity of the vessel should have been interrupted by the progress of ulceration after the removal of the ligature, according to the idea adopted by Vacca-Berlinghieri and others.

In Dr. Solera's case, the patient was a strong man, aged 36, in whom a popliteal aneurism suddenly appeared, and who came under his care in the civil hospital of Mantua; he tied the femoral artery at the inner side of the sartorius, somewhat below the upper third of the thigh, detaching it about half an inch from the vein, &c., and placing a cylindrical compress in front of the vessel. Considerable fever, &c., ensued and the sensibility and heat of the limb were much diminished, with vesications, livor, and threatening of gangrene of the foot. Between the fourth and fifth days the ligature was removed, for which purpose it was necessary to destroy the union of the edges of the wound; with that exception it was effected with great facility. The gangrene proceeded so far as to occupy the foot and half the leg, but in proportion as the health of the patient improved separation of the dead parts took place, and that with little artificial assistance, except the division of the bones by the saw. The aneurism steadily diminished, the wound of the operation healed, and at the end of some months the patient completely recovered.

Dr. Manzoni's patient was aged 50, and had perceived a tumour in the ham three months before the time of operation. Dr. Manzoni made an incision four inches long in the upper third of the thigh and exposed the superficial femoral artery; he then passed a flat ligature under it, which he tightened over a roll of plaster, till he stopped the pulsation of the tumour.

He did not bring the edges of the wound together, but filled it with charpie, in the manner recommened by Scarpa, Boyer, and Roux, in order to facilitate the removal of the ligature. The pulsation of the arteries of the foot could be felt on the second day, and the patient being but weak, it was not until the end of the fifth, that Dr. Manzoni undertook to remove the ligature, which he easily effected by cutting it with a convex-edged knife, at that time the tumour was less by one half, and continued steadily to diminish until the recovery of the patient at the end of a few weeks.

The instance related by Dr. Odone, differs from the others in this, that the artery was tied in consequence of a wound, and not for the cure of aneurism. The patient, aged 71, fell on a steep rough road, and wounded the radial artery by striking the lower part of the forearm against a sharp stone. He lost a very large quantity of blood, but stopped the hemorrhage by applying a tight ligature above the wound. On the ninth day, the bleeding reappeared after a slight motion of the body, and though checked by tight ligatures, continued in some degree for thirty hours. The relator then saw the patient, and found him pale and much debilitated, with a small pulse, syncope, and a tumid state of the forearm. After placing a tourniquet round the arm he removed the bandages, and observed the blood escaping from the radial artery. He dilated the wound, exposed the artery for two inches and soon discovered the situation of the wound in it. He then passed a single ligature of three threads under it, tied the extremities over a cylinder of plaster, and brought the edges of the wound together. The condition of the patient soon improved, he gained strength, and the swelling of the forearm diminished. On account however of his age, Dr. Odone did not remove the ligature until the end of the sixth day, fearing that the process of adhesion between the sides of the artery might not have been completed before that period. It is unnecessary to detail the subsequent progress of the case which was satisfactory, and terminated in the perfect recovery of the patient.

NEW ITALIAN DOCTRINE.*

On a former occasion, when giving a general sketch of the new Italian Medical Doctrine (*Quart. Journal*, Vol. IV. p. 208),

* Storia della Febbre Petecchiale di Genova negli Anni, 1799, e 1800, &c. &c. di G. Rasori, Professore di Clinica nei due Spedali Civile e Militare di Milano, Terza Edizione, Milano.

we made allusion to this work, and to the circumstances under which it originated. To the best of our knowledge, no more particular account of it has appeared in the Medical Journals of this country, and we think, therefore, that this fact, and the gratification we have personally derived from its perusal, will quite justify us in more directly calling the attention of our readers to its contents.

The first edition of this account of the fever of Genoa (which may be considered as the ground-work of the present Italian Medical Doctrine) appeared in 1801; the second in 1806; and the third, in 1813; and it is the last that we propose to analyse.

Professor Rasori commences by complaining, that of late years the accounts of epidemic diseases have been needlessly multiplied, and that the greater part of them do not merit the fame such writings have acquired, of being useful to the progress of the science. Most of them, he asserts, may be reduced to a more or less exact enumeration of symptoms, and a more or less complicated catalogue of remedies; few of them being dictated by the spirit of philosophy so essential to observation. "What," he asks, "is to be expected from the accumulation of collections made under such auspices, and in which, in spite of the assertions of the authors, we may always discover traces of the false theories of their times? What can be learned, except that a disease appeared in its commencement with such and such symptoms, with certain others in its progress, and had a favourable or a fatal termination?—that one remedy was used in the beginning, another afterwards?—that, in the course of the disease, one remedy was directed to certain symptoms, another to others?—the one dictated by certain views, practical or theoretical, the other by different ones?" "But," says he, "it is never asked, what is the operation of each remedy? Is the operation of those employed similar, or not? If not, how is their combined influence to be calculated? Are the symptoms which appear at the end of the disease really a part of it, or are they the product of the treatment? How few are there who have directed their attention to these important problems, which, if neglected, render medicine itself a problem still less soluble?" Professor Rasori gives our countryman, Sydenham, the merit of being, without exception, the best of medical observers. Yet even he theorized ill, and made his treatment unnecessarily complicated, even in inflammatory diseases, in the distinction and treatment of which, our author thinks him far superior to those who have succeeded him.

"To render the history of a disease truly useful," continues he, "it should clearly and certainly show the influence of the

treatment on the progress of the complaint." Hence the treatment should be simple and uniform, all its parts acting in one way, and directed to one object. For instance, whether the disease terminate favourably, or not, he thinks that nothing can be learned from a mode of treatment in which opiates are combined with antimonials, bark with purgatives, bleeding with blisters, camphor with nitre, and evacuations with food; because the action of the one set of measures is directly contrary to that of the other, and because their actual combined effect admits neither of measure nor comparative calculation. He warns us, however, that the desirable simplicity of practical medicine does not consist in the inactivity promulgated by some celebrated schools, and which he considers the fruit of ignorance and scepticism, but rather in adherence to the means exclusively necessary in a scientific, bold, and prudent use of them, and in avoiding absurd complications, injurious in their operation, and confusing the ideas of the physician, so as to disable him from giving himself a satisfactory explanation of what he is about in the treatment of a disease.

Symptoms of the Disease.—Having thus expressed his opinion of the defects of medical observation, and of the principles which should be adopted as guides, the author proceeds to the commencement of his subject. The circumstances of the war then raging brought him to Genoa, in June, of the year 1799, where he found that the atmosphere exerted an influence on him different from that of the plains of Lombardy. This was shewn by a sense of heat along the trachea, a slight cough, and symptoms of catarrh, which did not disappear until he gave up the use of coffee, wine, and liquor of every kind, making his diet at the same time more vegetable than customary. He concludes, that the atmosphere of the district, at least at that time, was more stimulant than that of Lombardy, to whatever cause it may be attributed. In others of his countrymen he observed the same effects as upon himself.

In August, 1799, he began to meet with some cases of fever, and observed a uniform character in all. They continued to occur during the autumn and winter, not frequently, but always of the same kind. In the following spring and summer they increased, and a considerable number of cases constantly came under his care, up to the beginning of July, 1800, when he left Genoa for his own country. At that time the cases were more frequent than ever, and the mortality considerable.

Those attacked by the disease usually began by complaining of pain in the head, more or less severe, and with a feeling of vacuity in it. In some cases the delirium at the beginning of

the complaint was great. For the most part the attack was announced by rigors alternating with heat; but in some the fever appeared without these precursors; in others, only with a feeling of increased heat, or with the symptoms of a mild catarrh. Almost all complained of muscular weakness, sometimes so great as to induce syncope on taking a few steps; it was often attended, particularly in the latter periods of the epidemic, with pains either of the whole body or of the extremities only. The countenance presented great differences in individuals; in some, turgid, flushed, and with slight inflammation of the palpebræ; in others pale, but in none with the leaden hue and character of depression peculiar to the true nervous fever. The eye was generally brighter than natural; the skin moderately hot; and the thirst not excessive. The tongue was at first natural, but in the course of the disease became covered with a coat sometimes white, sometimes yellow. Tinnitus aurium sometimes appeared within the first few days; more commonly not until an advanced stage, and then accompanied by deafness, from which few were exempt—so much so, that even the attendants learned to view it as the sign of the approaching termination of the disease. One of the most constant and unpleasant symptoms at the beginning, was obstinate pervigilium, with restlessness; the patient constantly implored the physician to make him sleep; but if the latter was imprudent enough to give opiates, the waking and restlessness increased, or passed into sopor, unless the smallness of the dose, or the action of the remedies used in combination, rendered the narcotic inert. The pulse in the beginning was frequent, small, and weak. The bowels were constipated, and with difficulty acted on. Epistaxis was not infrequent, and gave relief at every period of the disease, particularly if copious.

The first period continued with these symptoms from three to five days; the disease then became more severe, though this aggravation was much less if the treatment in the beginning had been proper. In this period the fever assumed a remittent form, though not very regular, and convulsions frequently occurred, with syncope, subsultus tendinum, a tremulous tongue, and occasionally, difficult deglutition. The pulse presented remarkable varieties, even in the same individual, and in the same day; for the most part it was small, unequal, often intermittent, or not to be felt. Petechiæ, or miliary eruptions, or both appeared, and the extent of the eruption appeared to be in proportion to the severity of the disease, so that in slight cases none were perceptible. The increase of the other symptoms was almost always attended by delirium, or by stupor, or by both alternately.

The tongue then became dry, swelled, and encrusted with a black fur. In this condition meteorismus was not uncommon; and mostly, though not always, considerable evacuations by stool. Hiccup sometimes occurred, and caused much inconvenience. Vomiting was less frequent, and did not often happen, even with the use of large doses of tartar-emetic. Respiration was seldom affected, except when it became laborious under the use of stimulants.

The convalescence presented nothing worthy of particular notice, excepting two circumstances; the one was a frequent expectoration when the patient began to amend, and that without any evidence of the existence of a local affection; the other, that when the fever diminished, and the delirium or stupor ceased, the patient became sad, desponding, out of humour, and for the first time sensible of his danger.

As to those who were most frequently attacked by this fever, they were the young, the middle aged and robust; less commonly the old and cachetic; not many females, and of them the youngest and strongest. In the commencement of the epidemic the number of the lower classes affected was in proportion smaller than of the higher orders, but in its progress it became uniformly diffused. In many of the poor whom the author attended, he learned that before their illness they had drank to excess, a circumstance not uncommon, from the abundance and cheapness of French wines.

The epidemic was fully developed before the blockade of Genoa was strictly enforced; at the time that it was most effectual, when the majority of the population suffered from hunger, the disease not only did not increase, but actually lost ground, though the effects of scanty and bad food were evident in many individuals. The author ventured to prophecy that the epidemic would increase when the means of subsistence should be afforded by the raising of the blockade, and the temperature increased by the progress of the season; and the event corresponded with the prediction.

Diathesis, Causes, and Mode of Treatment.—By the term diathesis, the author, with the rest of his countrymen, appears to mean what we more commonly call the nature or character of a disease. He justly remarks that without a knowledge of the diathesis or character of a disease, the treatment cannot be suitable unless it be by accident, which is the plan of an empiric, and not of a physician. This knowledge results from the discovery of the causes, or if these, or their mode of operation be unknown, from a prudent trial of the measures judged to be, if not certainly, at least probably, suitable—which, in fact, is but

the expression of the rule laid down by Sydenham, so often quoted and so constantly neglected.

The first patients whom the author treated in the summer of 1799 were strangers, refugees, or soldiers, before the existence of an epidemic was suspected. He considered each case separately, the idea of a general and a common cause not entering his mind. The symptoms appeared to be those of typhus, or of nervous fever ; the remarkable prostration of strength from the earliest period, the irregularity and smallness of the pulse, with other symptoms, presenting the appearance of debility, deceived him, though not completely. The examination of the causes seemed to justify the idea he had formed, for the disease had been in most instances preceded by the operation of depressing passions, by excessive fatigue, exposure to rain, and bad and scanty food. He was thus led to put in practice the mode of treatment which seemed to be most indicated : he began to use stimulants, commonly decoction of bark with Hoffman's anodyne liquor, or laudanum, or both, as the circumstances seemed to require. With these measures was joined the use of wine, a generous diet, and an abstinence from watery fluids, and every thing which might counteract the proposed plan. In the space of a day or two he became dissatisfied with the state of his patient ; instead of being relieved, the symptoms had plainly increased, the pulse had become more frequent and hard, the face red, the eyes bright, and respiration laborious. The bad consequences were so evident in these first cases, that at the end of a few hours the author substituted for the stimulant plan copious dilution with watery fluids, neutral salts, tamarinds, nitre, and low diet. At this time he did not employ bloodletting. The fever ran its course ; in ten or twelve days the improvement was manifest; and in the latter stages the evacuations were copious. In this period the delirium and stupor were moderate, the stomach and intestines easily acted on, and the symptoms altogether more moderate than when the epidemic had more fully developed itself.

In the autumn, the author again met with the fever more frequently, and continued to do so through the winter. Guided by the preceding cases he adhered to the debilitating plan, and found the cure easy, and convalescence rapid. Even at this time, however, he had no suspicion that the disease was epidemic, and produced by a common cause, but rather supposed it to be endemic, and confined to strangers, particularly as he had himself experienced the stimulant quality of the air, and as he understood from the physicians of the country that the disease was not uncommon in Genoa.

It was not until the beginning of the next year that he discovered the real state of the circumstances, from the increase of the disease, and from learning that a similar epidemic had made great ravages at Nice. At the same time, too, some of the symptoms, particularly those affecting the head, increased in severity, and the whole of the second period of the disease became more alarming. The nature of it, however, remained the same, as the author concludes from the uniform success of the treatment he had before employed. As the disease became more severe, he increased the activity of the treatment, beginning the blood-letting by leeches, or cupping, to the extent of eight or nine ounces. As it soon became difficult to procure leeches, he began to substitute venesection, as he would have done sooner, had he not have been prevented by the prevailing prejudices on that point. These evacuations were moderate, seldom two, and never three in number; for as it is well known that fevers of this description have a certain course, and a determinate period, which it is impossible to shorten or control, they neither require nor admit the same active treatment which is proper to destroy and cut short other diseases of a more simple nature.

Next to blood-letting Professor Rasori made most use of antimony, particularly tartar emetic and kermes mineral. The principles, and consequently the manner and result, with which he employed tartar emetic were different from the common ones. If he saw the patient at an early period of the disease he began with it, and continued until there were symptoms of amendment. He gave daily, four, six, eight grains, or even more, dissolved in a large quantity of any agreeable drink, of which the patient frequently took divided doses. This practice, says he, will probably surprize many, but what will they say when they are told that in the greater number of cases no remarkable evacuation followed, and that frequently while taking so much tartar emetic, the patient did not even vomit once? In one case, of a stout youth of twenty, four grains in one day, not having produced any effect, were increased on the next to six, with the same result, and so, gradually to sixteen daily, still without causing any evacuation: a clyster returned as it was administered. The patient improved, the tartar emetic being continued though in smaller doses; in seven days, he was free from fever and rapidly recovered. In another case, a man of thirty-four became delirious and attempted to throw himself from a window. From the first he could with difficulty be induced to drink, and the occurrence of stupor made it impossible. Clysters were given, containing half an ounce of nitre and sixteen grains of tartar eme-

tic; there was no evacuation until the fourth, when an ounce of salt was added. The clysters being continued without the salt, produced no evacuation, and by this mode of treatment the stupor disappeared in eleven days. Lemonade, containing six grains in solution, was then given, and still without causing evacuation. The cure was completed by small doses of nitre and tartar emetic.

This possibility of supporting large doses, adds he, cannot be attributed to any want of activity in the medicine. The physicians of Genoa know that the tartar emetic in their shops, prepared in a uniform manner according to the directions of their Pharmacopœia, produces vomiting in the dose of two or three grains. Besides, he has often shewn, in the Hospital of Pavia, the surprising power of the system to support without injury, and even with advantage, not only tartar emetic, but all antimonial preparations, nitre, emetics, and purgatives even of the most drastic kinds. Hence this phenomenon was not peculiar to the fever of Genoa, but a constant and general character of the sthenic diathesis, hitherto neither clearly recognised and determined in practice, nor philosophically analysed in theory. If these same remedies which appear to have so little effect on the sthenic diathesis, be employed in affections of an opposite character, the comparison of the consequences will shew the difference of the two conditions of the system. As an instance, Professor Rasori quotes the case of an old woman, of weak constitution, who became ill from the effects of fear, and inconvenience during the bombardment of the city. An ignorant practitioner mistaking the case for one of the fevers prevalent, put her on low diet, purged her with an ounce of cream of tartar, which produced copious evacuations, and then gave her two or three grains of tartar emetic, which caused such vomiting and purging that she was expected to die at once. Stimulants were given largely, but she had already fallen into a state of languor and stupor, alternating with convulsions, which left little hope. She died, says Rasori, the victim of ignorance, and by a dose of medicine much smaller than would have been capable of producing any sensible effect in an opposite state of the system.

The manner in which he employed the kermes mineral was equally bold; he combined it with nitre, and according to the urgency of the case, gave from half a grain to a whole one, with a scruple of nitre, every one or two hours. Whether he employed tartar emetic or kermes, or both together or alternately, he never omitted clysters, made purgative by tartar emetic, copious dilution with vegetable decoction, free circulation of air, and light clothing. With regard to diet he was particularly

cautious. To the rich, he recommended vegetable jellies, for two reasons, first to stop the importunities of the patient and his friends for food, and next to administer a contra-stimulant in the shape of nourishment. To the poor, he allowed juicy or boiled fruit, and as it would have been impossible to prevent them from using some broths, he availed himself of the opportunity to give nitre and antimonials in solution.

Besides the medicines already mentioned, he used purgatives, such as neutral salts, manna, or tamarind pulp, in large and repeated doses. His choice of the different measures was directed by circumstances, as the inclination of the patient or his friends, or the opinions and prejudices of other physicians. It will be seen, says the author, from the principles I adopted that I could not approve the complicated methods commonly admitted even in inflammatory diseases. However great the stupor or delirium, I never thought of blisters to rouse from torpor, or to effect a derivation from the head. This treatment of symptoms is truly the scourge of the human race; its best consequences are to destroy with one hand what is done by the other, whilst accident and not science, decides the event of the disease. I have always, he continues, looked on blisters as nothing more than mere stimulants; that they are such at least, is certain. Can as much be said of their actions as derivatives? And if the cause of stupor consists in the nature of the disease, and this nature be sthenic, can it be supposed that we shall rouse the system from its stupor, by stimulating it with blisters? We might as well expect to rouse a drunken man, by pouring more liquor down his throat.

What Professor Rasori said of blisters he extended also to bark, opium, camphor, and the like. According to the ordinary mode of treating symptoms each of these would have been applicable in this fever. For instance, its remittance and supposed putrid nature would have suggested the use of bark. He allows, however, that the most intelligent of the physicians soon perceived that its use was inadmissible in every period of the disease. Unfortunately, however, this was not the case with opium and camphor. However clear and well proved the stimulant action of opium is, the minds of men are not yet (1801) familiarized with the idea. Physicians look on it as the best antispasmodic and sedative, and as being applicable whenever we wish to stop convulsive motions, diminish pain, and procure sleep: with such views it was often used in this fever, and always with bad consequences. Bad theories, says Rasori, must produce bad practice, and it would be well that those who lay such stress on the advantages of sound practice to the neglect or

exclusion of theory, should turn a little of their attention to these practical errors, the necessary consequences of theoretical ones. We believe the truth is, that most of those who declaim on the exclusive advantages of experience, are precisely such as have had least; the inevitable consequence of real and diligent experience is a theory of some sort or other, and who will be found bold enough to say that his practical conduct is uninfluenced by the speculative opinions which almost unconsciously occupy his mind? I admit, continues Rasori, that very different opinions do sometimes lead to the same result; because, where the truth is firm, error yields and modifies itself. But are we to trust the exercise of medicine to the uncertain yielding of error, rather than to the firmness and certainty of truth?

Camphor, as it is supposed to possess another quality more than opium, that of an antiseptic, was employed still more frequently, and its victims were more numerous than those of opium and cinchona. Would it be believed, asks the author, that in this century, it was supposed to possess a power of resisting contagion, and employed as an amulet for that purpose? The best preservative, as he found by his own experience, was temperance; for if it fails to prevent the disease, it at least renders it less serious than it would have otherwise been.

Hitherto nothing has been said of critical evacuations or days. This omission, says the Professor, will be imputed to me as a crime by the admirers of Hippocrates; but I have not pledged myself to the opinions of any one, much less of Hippocrates, of whom, on another occasion, I have shown how little his merit corresponds with his reputation, not only as a reasoner, but even as an observer. As for myself, not only in this epidemic, but in every other disease, I have not thought of treating my patients by the days, but according to the nature and degree of the affection. If it be true, that when a fever is left undisturbed, there be certain days on which certain events and changes occur, it is a fact which, without venturing to deny, I candidly confess I have not ever been able to observe; and farther, which appears to me more difficult to be observed than is perhaps imagined. Whatever degree of attention I paid to those cases, in which the commencement of the disease was best ascertained, I was never able to observe satisfactorily the regular duration of any period, long or short; for even if the difference be not more than one or two days, it is more than enough to destroy the supposed observation of critical days; for in a period so short as ten, fifteen or twenty days, a difference of one or two is not to be got over. If it be objected that the activity of the treatment caused this irregularity, how does

it happen that it does not produce the same effects in small-pox, &c. The evacuations did not present in their quality, quantity, or in the period of their appearance, any thing worth notice, or useful for directing the treatment.

After having adduced some arguments to shew that there was not any ground for the supposition that this fever was nervous or malignant, the author proceeds to the consideration of some questions connected with it, on which we shall confine ourselves to stating his conclusions. He inclines to think that the disease was contagious with certain limitations; that it depended on the diffusion of miasmata through the atmosphere, which differed, however, from marsh miasmata in this respect—that the disease arising from them possessed the power of eliminating morbific particles infecting the atmosphere, and influencing other individuals; that a predisposition alone is insufficient to render the system susceptible of the operation of the causes of the disease. He professes himself unable to ascertain the original source of the miasmata producing the disease, and differs in opinion from the physicians of Genoa, who pretended to trace it to the military hospitals. According to Rasori, the disease did not appear in those establishments sooner than in the rest of the town, and increased and declined about the same time. The fever which existed at Nice at the same time with that at Genoa, appeared, as far as he could learn, to be of the same character, to present the same symptoms, and require the same mode of treatment.

The next part of the work consists of a large collection of cases, shewing the nature of the disease, and the mode of treatment; of these, as well as an inquiry into the antiquity and history of petechial fevers, we think it unnecessary to take any notice, but proceed to what is said of the diseases which prevailed at the same time with the fever. It was observed by Sydenham, and has been generally admitted, that during the existence of an epidemic, the intercurrent diseases assume more or less of its character. In the present instance, their nature was for the most part sthenic; they were principally pneumonia, erysipelas, rheumatic and catarrhal fevers, ophthalmia, jaundice, &c. Ophthalmia, though slight, was very common; and in Rasori's practice, none who had ophthalmia were attacked by the fever. Notwithstanding this, he does not take upon him to pronounce that the intercurrent diseases, or at least the greater part of them, depended on the same causes with the epidemic. This opinion, though commonly received, he thinks is far from being proved, and from the nature of the subject cannot be very easily investigated.

Among the notes appended to the body of the work, are some observations on the contra-stimulant treatment of diseases. In the second year, says the author, of my appointment as Professor of pathology, at, and physician to the hospital at Pavia, came under my care, several sthenic or inflammatory dropsies, a form of disease more frequent than is commonly imagined. I treated them not with pretended specifics, but with the same remedies as I employ in other sthenic diseases; purgatives both mild and drastic, tartar emetic, nitre, copious dilution and low diet; the same treatment for ascites, for anasarca, or hydrothorax. Some of these patients took daily, six or eight grains of tartar emetic and an ounce and a half or two ounces of cream of tartar, in divided doses; others, with the same quantity of cream of tartar, thirty grains of jalap, and upwards. On this plan the evacuations were increased, and by a perseverance in it, according to circumstances, all recovered, except one, in whom dissection shewed considerable disease in the abdomen. From these, and similar facts, Rasori concludes, that there are not any remedies which can be called diuretics, viz. that exert a specific influence over the secretion from the kidneys; for that remedies, which appear to operate as diuretics in some cases, have no such effect in others, and that dropsies which are cured by supposed diuretics would terminate as well by the employment of purgatives, emetics, nitre, dilution, blood-letting &c. This assertion seems to be too general, for it is well known that even in a state of health certain medicines do act specifically on the kidneys, as others do on the stomach, skin, &c. The facts only shew that there is no specific for the cure of dropsy, and the assertion beyond this is incorrect.

The last part of the treatise, consists in an investigation of the sources of error in the treatment of this fever. Professor Rasori reduces them to eight heads, which we shall briefly recapitulate.—1. The mild character of the petechial fever, is compared with synocha, and acute inflammations, which led many to form mistaken ideas of its nature.—2. The fact that it had a tendency to run a certain limited course, and at the end of a longer or shorter period presented a tendency to a spontaneous cure, so as to make the bad consequences of an improper treatment less prominent than they merited. 3. The treatment of symptoms only, and the consequent employment of many remedies having different and opposite modes of action, rendering it impossible to observe clearly the succession and dependence of facts. 4. The mixture of opposite remedies and the occasional employment of others, of the action of which an incorrect opinion was formed, as of serpentaria, contra-yerva, valerian,

kermes, acids &c., as stimulants, whilst they are in fact contra-stimulants. Under this head, Rasori informs us, that posterior researches have convinced him that cantharides, taken internally, are active, and applied externally, moderate contra-stimulants. 5. The fact that patients treated on a supposed stimulant plan, and recovering under it, lived on low diet, drank copiously of diluting fluids, and abstained from the stimulants ordered for them, facts of great importance but little attended to by those who lauded stimulants. 6. The moderate doses and imperfect manner in which the stimulants were employed, and which were counterbalanced by circumstances already mentioned. 7. The neglect of dissections of those who perished from the effects of the fever. And 8thly, the want of proper returns, shewing the result of the modes of treatment employed, a defect giving rise to gratuitous assertions, uncertain results, and questions on matters of fact.

Such is our imperfect account of a work, which has formed an epoch in the philosophy of medicine, not only in Italy, but through the civilized world; for we are inclined to believe that even in our own country, secluded as it was from an intercourse with the Continent for many years, many of our favourite and best established opinions have been unconsciously derived from this quarter; that the modern French doctrines sprung from the same source is perfectly clear, for Broussais is not any thing more than a disciple of the Italian school, and far behind his preceptors in simplicity and talent. That the principles inculcated by Rasori and his followers, are occasionally incorrect and even extravagant we have no intention to deny, but at the same time, we venture to assert that he will always hold a high rank among those who have exerted themselves to rescue our science from speculation on the one hand, and empiricism on the other, and to place it on the firm basis of correct induction from the observation of facts.

One of the greatest errors of this school strikes us to be the practice of inferring the nature of diseases from their presupposed notions of the action of remedies on the one side, and on the other, drawing conclusions of the action of remedies from their effects in the treatment of diseases, the nature of which may perhaps equally stand in need of proof. These practices have occasionally led them into conclusions manifestly contradictory to each other, and to the principles on which they are founded. The conviction that this and similar facts has left upon our mind is, the necessity of a careful investigation of the action of many of the principal articles of the materia medica, unconnected with preconceived opinions. A work of this nature,

founded on experiment, would be of the utmost advantage to the science of medicine, and would tend to give it support where it is most wanted. We forbear, however, to enlarge on this point, as we shall probably return to it on a future occasion.

British Review.

Mr. Earle and Sir Astley Cooper on Fractures *.

Controversy, though it always engenders passion and parties, is often one of the most powerful instruments of eliciting truth, and of discovering facts which might otherwise have escaped observation. Medical controversies, however, seem to excite but a comparatively feeble interest even in the profession, and to extend only to the usually narrow sphere of the controversialists' immediate friends or enemies. So far as we are informed, this is much the case with the controversy between Mr. Earle and Sir Astley Cooper, respecting fractures of the cervix femoris. A few of those practitioners of their immediate acquaintance, take up the matter warmly, while at a distance it is looked upon with cool indifference. In proof of this we may state, that though Mr. Earle's book has now been published for two months, it has been scarcely noticed by any of the Medical Journals; and what is more, there has been no very eager demand either for it, or for Sir Astley's reply. As we, however, think the subject in dispute of considerable interest, at least in some of its parts, we shall bring it as fully before our readers as our space will admit.

In reviewing Sir Astley's work, in our seventeenth Number, and his Appendix in our last, we gave a very minute account of the subject now under dispute, and made some observations respecting the union by bone, which neither of the parties seem to have perused. These we shall not now repeat, but proceed

* Practical Observations in Surgery. By Henry Earle, F.R.S. Assistant Surgeon to St. Bartholomew's Hospital, and Surgeon to the Foundling. pp. 229. 8vo. with engravings, Underwood, London, 1823.

Observations on Fractures of the neck of the thigh bone, being an Appendix to the work on Dislocations and Fractures of the Joints. By Sir Astley Cooper, Bart. F.R.S. Surgeon to the King, &c. &c. pp. 44. 4to. with plates, London, 1823.

to what we conceive to be the fairest mode of exhibiting the subject, namely, allowing the parties to be severally heard in their own cause.

Causes of Fracture of the Cervix Femoris.—"The neck of the thigh-bone is so protected by the surrounding soft parts and the trochanter major, that it is completely defended from the immediate action of external violence, and consequently from any direct fracture. It follows, that it must be broken by a contre-coup, either by a fall on the trochanter, the feet, or knees. The former of these is by far the most frequent cause; although, on a superficial view, it may not appear the most probable. Desault says, that in his practice 24 cases in 30 were produced in this way. The experience of Sabatier and Richerand proves the same fact. In the very ample opportunities I have had of witnessing these cases in the wards of St. Bartholomew's Hospital, and elsewhere, I have met with only hree exceptions to this."—EARLE, pp. 19, 20.

"These observations are quite contrary to my experience; for fractures of the neck of the thigh-bone, within the capsule, have been often produced by violence, which acted perpendicularly; or they have been occasioned by a sudden rotatory motion of the pelvis upon the thigh-bone," &c. "With respect to Desault, whose practice, for a short time, I had an opportunity of witnessing, and for whose character I have the highest respect, like some of our English surgeons, he confounded the three fractures of the upper part of the thigh-bone, under the general term of "Fracture of the neck of the thigh-bone."—COOPER, pp. 9, 10.

This point is a mere matter of authority—Sir Astley Cooper on the one hand; and Desault, Richerand, Sabatier, and Henry Earle, on the other: our readers must decide according to their opinion of the value of each. On the next point at issue we must extract more copiously.

Diagnosis.—"Where a person, previously in full possession of the locomotive powers of his limb, after the receipt of any injury, and particularly after a fall upon his trochanter, becomes suddenly deprived of that power, accompanied with a remarkable consciousness of incapacity in the injured member, and when, from the position and direction of the limb, it is obvious that there is no dislocation, a strong presumption must arise that a fracture has taken place. In such a case, a surgeon is *fully warranted to act on such a suspicion*, and to treat the case as a fracture, without subjecting his patient to painful examination, to gratify his own curiosity." "I cannot quit this subject without deprecating, in the strongest terms, the cruelty and im-

propriety of what is termed "satisfying yourself that there is a fracture, and its precise situation." Such examinations it has fallen to my lot to witness much too frequently; and in many instances the results have been most injurious. It may probably be urged, that if we omit this we may be mistaken, and subject a person to unnecessary confinement. This will very rarely occur, as the consciousness of power is so implanted in our nature, that it would be difficult, indeed, to persuade a person, whose limb was entire, to submit to confinement for any length of time."—"But even admitting the possibility of a mistake, it is surely far better that a few persons should be confined for a somewhat longer period than is absolutely requisite, than that many should have their recovery prevented or retarded."—"This symptom of a sudden and total privation of power of motion, after a fall on the trochanter, should always be regarded as a diagnostic of fracture."—EARLE, pp. 22-4.

"Good God! is this written by an English surgeon in the land of John Hunter, the minute investigator of nature, whether in health or disease? This is indeed cutting the gordian knot! What! shall not the surgeon satisfy himself that there is a fracture, and its nature, before he exposes his patient to a confined position of great duration? for if the surgeon be not suffered to examine the limb, when is that confinement to terminate? Are such doctrines to be taught, such advice to be given to young men just embarking in their profession, that they need learn nothing of these cases? *For if a man has a fall, and a consciousness of inability, his limb is decided to be fractured!* Certainly it will save a great deal of time in studying the profession; and a great deal of trouble in knowing the nature of the case the surgeon is called upon to treat."—"If the advice which the author has given in the foregoing quotations is adopted by young men, who come to London for instruction, when they return to the country to settle in practice, they would all be ruined."—COOPER, p. 11.

We are really sorry to see such a passage as this come from Sir Astley. It is most evident that his warmth has made him take a partial view of Mr. Earle's directions, which has given these paragraphs too much the air of misrepresentation. Mr. Earle expressly says, that a sudden and total privation of motion is a diagnostic of fracture; that is, if there is any meaning in language, *one* of the diagnostics of fracture taken in conjunction with "*the position and direction of the limb*, the shortening of the limb," the state of the thigh at its upper and anterior part, with respect to bulk, depending on the extension or contraction of the muscles, and particularly his "distinguishing characters

of the different species of dislocations," contrasted with those of fracture," at p. 55, &c.; all of which Sir Astley overlooks, though they are dwelt on at length by Mr. Earle; and we should be glad to know whether the accurate examination of these circumstances, "will save a great deal of time in studying the profession." Sir Astley, also, in lamenting over the supposed unnecessary confinement of patients for a long period, entirely overlooks what Mr. Earle says of the utility of a few days' rest in all severe accidents that may be confounded with fracture; and the fact stated by Mr. Earle, and known to everybody, of the impossibility of persuading a person with a sound limb to be confined to an immoveable posture. The inuendo which Sir Astley has thrown out, in the above quotation, to pupils from the country, is one of the most extraordinary and unwarrantable things in his book: we cannot form an idea of the motive which led him to pen such a sentence. We are sorry that it does not by any means raise Sir Astley in our opinion. Feelings of strong irritation it is evidently calculated to produce, unless it be looked upon with uncommon callousness and coolness. The case which Sir Astley gives, of a supposed fracture of the tibia, turning out to be merely a bruise, so far from making against Mr. Earle, is a strong confirmation of his principles; for, on finding that his leg was not painful, and that he could bear upon it, the patient would no longer remain in bed. In this case, where the diagnosis of fracture is so much easier than in the neck of the thigh, the surgeon might "deserve severe punishment for his ignorance;" but where the diagnosis is confessedly difficult, and the injury severe, we should most certainly prefer Mr. Earle's treatment. Sir Astley adds, "I would also ask any medical man who has had an opportunity of seeing much practice, if he has not witnessed cases in which persons, by a fall upon the hip-joint, have been unable to stand upon, or to move that limb, but who, in a few days, by the use of crutches, had recovered its powers, and used it as well as before?" p. 13. Now, if we do not very much misunderstand Mr. Earle, this is precisely what he has himself stated in the above quotation; though Sir Astley gives it the tone of triumphant opposition to him.

"It was most probably from want of sufficient attention to a careful examination of an accident, which led our author not to discover a fracture of the olecranon until the sixth morning after it had happened: see pages 144, 145. For, says he, page 146, 'I now (on the *sixth* morning after the accident) most distinctly ascertained that the olecranon was fractured.' Surely this ought to have been discovered earlier."—COOPER, p. 15.

On reading this passage, we confess that we at once agreed with Sir Astley's inference, and blamed Mr. Earle for his negligence or ignorance. But on turning to Mr. Earle's account of the case, we find that he had minutely attended to all the diagnostics of such a fracture, as laid down in the systematic works, and finding none of them present, treated the accident accordingly; and he introduces the case for the express purpose of putting his readers on their guard against trusting too much to systems of surgery in their diagnosis, by which he candidly confesses that he was led astray. We must therefore consider Sir Astley's quotation and remark quite partial and unfair.

"The next symptom to which I shall advert, is the degree of shortening of the limb."—"When broken within the articulation, or near the head of the bone, very little or no retraction takes place at the moment of the accident. The contrary to this may be observed with respect to fractures external to the capsule. Exactly the reverse of this, however, is advanced by Sir Astley Cooper, who states, that "the limb is from one to two inches shorter than the other." In the Appendix to his last edition, Sir Astley Cooper states, that the limb is two inches and a half shorter."—"With respect to the shortening of the limb to the extent of two inches, as I have never witnessed such an occurrence, I cannot but conceive that there must be some inaccuracy in the statement, more especially when the great strength and unyielding nature of the capsular ligament are considered, the utmost extent of which, at its upper part, does not exceed more than two inches from its origin to the insertion. If this does not constantly obtain, the instances are sufficiently numerous to form exceptions to the general rule laid down by Sir Astley, which he advances as a diagnostic of the nature of the accident."—Earle, pages, 25, 27, 42.

"I have stated it to be from one to two inches shorter than the other limb; and from having since seen a case in which it was more than two inches, I extended it to two inches and a half. But instead of this statement being greater than it ought, I have now to add, that, in Mr. Langstaff's collection, there is a preparation of the fractured neck of the thigh-bone within the capsule, taken from a man named Campbell, aged 82, in whom Mr. Langstaff assured me the shortening was four inches."—"I know that there are examples in which the limb has been shortened only half an inch; but these are exceptions to the general rule."—"In fracture of the neck of the thigh-bone external to the capsule, when the trochanter splits, and the neck of the thigh-bone is received into its cancelli, the degree of

shortening of the limb is very slight, for it rarely reaches an inch, and is from half an inch to three quarters only."

COOPER, pp. 15-17.

Mr. Earle being supported in his opinion of the degree of shortening, by the eminent French surgeons, Delpech, Boyer, Richerand, Lesne, Duverney, Louis, Sabatier, &c., whom he has quoted, and Sir Astley has entirely overlooked—the point in dispute must be decided by the weight of authority for the fact. —We leave our readers to decide.

"In addition to these several diagnostic marks of fracture, Sir Astley Cooper considers the period of life at which these accidents occur, as characterizing the nature of the accident, and even influencing the situation of the fracture."—"In the first place, I would remark, that it is singular that the cases which Sir Astley has published in illustration of the above positions" (that the accident occurs at an early period of life, and that it is the result of severe injury) "on which he hinges so much weight, are not the result of his own practice and investigation; and, secondly, that they do actually, in every respect, contradict the opinions he has advanced." "We have the case of a woman, aged eighty-three and a half, who breaks the neck of her thigh-bone near the trochanter, by a slight slipping of her foot, without even falling to the ground, brought forward as the first and most prominent case, to prove that this accident occurs *at an early period of life, and is the result of severe injury;* whilst, on the other hand, internal fracture is the consequence of very slight injuries in very old persons."—"I cannot but suppose that Sir Astley Cooper does possess other, and less questionable proof of his position; yet it is to be regretted that he should have suffered another edition of his work to go to press with such apparent contradictions. The high respect I entertain for that gentleman renders it most painful to me to point out these passages; but the duty I owe to the public and my profession is paramount to every other consideration."—EARLE, p. 45—51.

"I come now to a part of the work, in which I have to complain of misrepresentation; and while I feel assured that this must have been unintentional, I am very glad that the matter is here so much condensed that it is very easy for me to make a reply. After giving an account of the fractures external to the capsule, so far as I have observed them, I have stated, that they occur under fifty years of age; but I also expressly say, "*that they occur in advanced age*" and give three cases which show that they do." "I have to state, that I have mentioned that fractures external to the ligament *occur under fifty years of age;*

a great number of these cases which have fallen under my notice, have occurred during that period, and therefore a surgeon called to the bedside of a patient with an injury done to the upper part of the thigh bone, if he finds the patient to be under fifty years, will, with a very rare exception, be correct in his judgment, if he concludes it to be either a fracture just external to the ligament, or one through the trochanter major. But I also maintain that *both fractures occur in age*, and therefore no conclusion can be drawn between the two in advanced age, but by the most careful examination. The three cases which I have given clearly shew this. If I had said these fractures external to the capsule only occur under fifty years of age, our author would have had some foundation for his remarks." "I have now been thirty-nine years at St. Thomas's and Guy's Hospitals; and, for thirty years, have had more than my share, and much more than I merited of the practice of London." "Now in that time I have only known *two cases* of fracture of the neck of the thigh bone within the capsular ligament *occur under fifty years of age.*" "Our author states that he has examined, *post mortem*, three fractures of the neck of the thigh bone within the capsular ligament in young people." "I shall request permission to examine these rare and curious cases, which our author has no doubt preserved." "I confess I fear some mistake may have arisen in our author's cases from the following circumstance:—There is in the Museum of the Royal College of Surgeons a preparation bearing this superscription, "Supposed fracture of the neck of the os femoris within the capsular ligament united in a girl five years old. By Mr. Henry Earle, 1818." Mr. Wilson, Professor of Anatomy and Surgery to the Royal College of Surgeons, said of this and another preparation in the Museum, in one of the Lectures he delivered at the College, June, 2nd, 1820, "I have examined very attentively these two preparations, and *cannot perceive one decisive proof* in either, *of the bones having been actually fractured.*"—Cooper, pp. 21-23.

We leave these passages for the consideration of the reader; but we cannot pass over the concluding sentence of Sir Astley's without remarking that he stretches his points rather farther than they will bear; for the inscription on Mr. Earle's preparation bears the words, "*supposed* fracture," and as Sir Astley, as we have already seen, accuses Mr. Earle of not knowing a fracture when he sees one; he appears here to half insinuate that he cures limbs which were never fractured at all.

Prognosis.—"On this principle of a deficient supply of blood, many authors have entertained an opinion, that in no case can

bony union take place within the capsular ligament. The consequence of such a doctrine leads directly to the abandonment of all attempts at restoration; and the unfortunate patients are doomed to lameness and deformity for the remainder of their lives." "But even when the head has been completely severed from the neck, it has possessed sufficient powers to maintain its own vitality, as I never yet heard of an instance in which the head had perished for want of nourishment." "I cannot but consider, that to doubt the possibility of union, even when the head is quite separated from the neck, betrays a want of confidence in the reparative efforts of nature." "I now come to consider the opinions entertained by Sir Astley Cooper." "After stating that he never met with a single instance of bony union of the cervix femoris within the capsule, and his firm conviction, that such cases must be attended with more or less lameness, Sir Astley proceeds to state the causes which he conceives contribute to this effect: and first mentions the want of proper opposition of the broken ends; "for if the broken extremities in any part of the body be kept much asunder, ossific union is prevented." The correctness of this statement, as a general position, is very questionable; the cases recorded by Mr. Dunn, in the Twelfth Volume of the Medico-Chirurgical Transactions, clearly prove the possibility of bony union after the removal of three inches of the tibia, and the consequent separation of the bones to the extent of two inches." "I am perfectly willing to admit, that in the present case of fracture of the neck of the femur, if the broken surfaces are kept much asunder, that firm ossific union cannot take place;" "but if their proper relative position, be restored and that position be steadily maintained, which I hope to prove may very easily be accomplished, this objection no longer holds good." "Sir Astley Cooper has endeavoured to anticipate these observations in the following passage:" "But if this were the only obstacle, it would be argued that the retraction of the thigh bone might be prevented by bandaging and extension; *and the truth of this cannot be denied; but it is extremely difficult to preserve the limb in this position, as the patient in evacuating his fæces and urine, or by the slightest change of position, produces instant contraction of the limb, by calling into action those powerful muscles which pass from the pelvis to the thigh bone.*" "Here, however, we have a candid confession, that this first cause of non-union, namely, want of adaptation, does not depend so much on any insuperable obstacle arising from the nature of the case, as on the difficulty of treatment. Surely then it is our duty, instead of abandoning

such cases as incurable, to endeavour to remove this opprobrium from our profession, and by superior means, meet the exigencies of the case."

"That Sir Astley Cooper may not in general have succeeded in obtaining bony union within the articulation, I can perfectly understand from his own description of the accident; from the mode in which he has been led to view the case; and the treatment he recommends to be adopted." "I believe, that, in many instances of fracture within the capsule, the examinations, to which Sir Astley recommends that patients should be subjected, may have ruptured the remaining portion of the reflected layers of fibrous and synovial membrane, and thus have not only tended to insulate the head of the bone, but to increase the irritability of the surrounding muscles, and to create considerable inflammation in the synovial membrane. After describing the various directions in which the limb may be moved, and the different degrees of pain produced by these various manipulations, he proceeds thus:" (Mr. Earle here quotes from Sir Astley's Work on Dislocations, p. 121.) "Now if the generality of Sir Astley's patients, and particularly those in Guy's Hospital, have all these indications of fracture demonstrated upon their persons, it is not difficult to understand the great degree of shortening of the limb and destruction of the fibrous periosteum, which he has found in fractures within the capsule." "As I hold all these examinations to be worse than useless, and productive of great present suffering, and much consequent injury, I forbear to enter into any particular account of them."—Earle, pp. 54-85.

"I have said, that if the broken extremities of the bone, in any part of the body, be kept much asunder, ossific union is prevented;" but, as our author says, "that the correctness of this statement is very questionable;" to shew how questionable it is, I hope to be able to give in this appendix, or, at all events, shall do so in the third edition of my work, five different examples of non-union of the bone, produced by this cause. But I well know that two and three inches of the os femoris, or os humeri, may be removed and the bone unite, if its broken ends are suffered to be drawn together by the action of the muscles." "With respect to my own cruelty, or inhumanity, *particularly to the patients in Guy's Hospital*, God forbid that I should be the advocate of a cruel, coarse, or unnecessary examination, and no one has a right to accuse me of it; all I have recommended may and ought to be done with gentleness; ask my greatest enemy, and let his answer decide, whether the poor of London, and the patients in Guy's Hospital, are or are not anxious to place themselves under my care; but I have here to observe,

that those who shoot at random must take care they do not wound themselves; this is well exemplified in the production I am analysing; for, if I were disposed to be severe, what inferences might not be drawn from the following case of fracture of the neck of the thigh-bone, given in that work, page 30." (Sir Astley here quotes the case of Daniel Spilling, a patient in St. Bartholomew's Hospital, admitted Nov. 1820. Whether he was a patient of Mr. Earle does not appear. Sir Astley proceeds.) "For the world I would not, if I were able, say any thing which could lessen the character of St. Bartholomew's Hospital, or hurt the feelings of any of its Medical Officers. I know well the excellence of the Institution, the admirable manner in which it is conducted, and I live, and hope to live, in harmony with its surgeons; but I cite this case from the work before me, to shew that attacks upon the character of an Hospital, and of an individual connected with it, might lead to retaliation; but if I could stoop to do so, I should consider it as bad taste. The rivalship of Hospital Surgeons ought to consist in, who should most advance the science of his profession, and who should exert himself the most in lessening the sum of human suffering."

COOPER, pp. 13-25.

Now, with all deference to Sir Astley, we must say that this has all the appearance of giving up the point, instead of being a reply to Mr. Earle, who accuses him of destroying the reflected membranes, &c. and causing inflammation, and preventing a cure by his mode of examining the fracture. He does not once take up the subject to which Mr. Earle attaches the greatest interest. He says nothing about injuring the membranes; but makes an appeal to the poor of London, and the patients in Guy's Hospital, concluding with a direct retaliation on St. Bartholomew's Hospital, and a direct denial that it is a retaliation. Our readers would scarcely have believed us, had we stated this without producing the passages; but it requires no remark from us to point out the complete failure of Sir Astley's defence, so far as this point is concerned. We do not say that Mr. Earle is borne out, in all he has said on this topic; but we do maintain, that Sir Astley has not answered him at all. What makes this appear worse is, that in his work on Dislocations, page 143, quoted by himself in the observations before us, page 5, Sir Astley says, "The cases in which union might be produced are two: one in which *the periosteum covering the neck of the thigh bone is not torn through*, which now and then happens; and the other is when the head of the bone is broken, so that the cervix still remains in the acetabulum." If he admits, then, that the preservation of the periosteum may produce union, and Mr. Earle shews him that his examinations destroy it, ought he not

to acknowledge that Mr. Earle has exerted himself "in lessening the sum of human suffering," rather than make retaliations on Mr. Earle, which lead to nothing useful, and only expose the irritated feelings of the retaliator.

"The next circumstance is the prejudice which he acknowledges has existed in his mind for the last thirty years on this subject, which may fairly be supposed to have prevented him from making any effectual attempt to remove the difficulties attending the treatment, the greatest of which he acknowledges to be the securing the pelvis during the operations of nature. So very far indeed has this prejudice carried him as to induce him to express himself in the following strong language: "It is gratifying to find opinions, which have been *for thirty years* delivered in my lectures, confirmed by the observations of intelligent and observing persons; and therefore it was with pleasure I read the account of Mr. Colles, of Dublin, who found a similar want of ossific union in fractures within the capsule." It would, I humbly conceive, have been somewhat more gratifying to have found, that this opprobrium had been removed from our profession, and that the deformity, lameness, and misery of our patients had been diminished, or prevented. This strong bias has, indeed, evidently influenced the practice which Sir Astley recommends to be pursued, and which is the third source of his want of success."—Earle, pp. 85-89.

"It has been said that I have a strong prejudice upon the subject of union of the fractured neck of the thigh bone, but this I cannot allow. When I began practice, I made use of all 'appliances and means to boot' to produce an ossific union, but finding I could not succeed in a single instance, and that my patients suffered not only in health, but from sloughing sores upon the back, which sometimes destroyed them, I gave up the attempt, and now aim only at tranquillizing the parts to prevent inflammation, and thus lessen the danger of the injury, and I endeavour, as soon as possible, to restore to the patient an (*a*) useful limb by crutches, by a high-heeled shoe, and by the aid of a stick, until he can walk without one. I have witnessed the practice of Mr. Cline, Mr. Chandler, and Mr. Birch; of Mr. Warner, Mr. Lucas, Sen., Mr. Forster, and Mr. Lucas, Jun., in our two Hospitals, of St. Thomas's and Guy's; and I have seen the practice of a great number of surgeons in London, yet I never saw one of these gentlemen succeed in uniting a fracture of the cervix femoris within the capsule, although all variety of means were tried which their minds could suggest. Were these surgeons all prejudiced?" "As to Mr. Colles, who has never seen a fracture of the neck of the thigh-bone united, and every

one of whose writings shew that he is an excellent anatomist, and an intelligent pathologist, I confess it gave me pleasure to find him making a statement from accurate dissections, which accords with all I have observed in the last thirty-nine years: and farther, I was gratified that his enquiries must lead to the same conclusions, because a few contributions of a similar kind, from the ardent pursuers of morbid anatomy, would soon prevent patients from being *tortured with trials* which have been *frequently repeated, and found to be uniformly unavailing.*"

COOPER, pp. 31-33.

With all deference to the high authority of Sir Astley Cooper, we must unequivocally disapprove of these principles, which would, in fact, put a complete stop to all improvement, and set up the dicta and the prejudices of old and celebrated surgeons as infallible guides, whose practice it is impossible to improve. It appears to us most singular, that he does not hazard a single observation on Mr. Earle's peculiar practice, which he certainly cannot rank among the frequently repeated, and uniformly unavailing trials, with which *he* has seen patients tortured, if he has never, as it appears, tried it. If he has tried Mr. Earle's method, why does he not say distinctly that it has failed with him, and must be unavailing? But, no: he does not even allude to it, and keeps to an indefinite expression of frequently repeated trials, and all the variety of means which the minds of the surgeons he has seen practice, could suggest. Unless he can offer some other objection to Mr. Earle's mode than these vague remarks, we must conclude that he is prejudiced against it, though it accomplishes precisely what he had found very difficult, if not impossible, and held to be a desideratum, namely, preventing all motion of the pelvis. We should have thought, although we are for once mistaken, that it would have given Sir Astley more "pleasure," and "gratified" him more to find that Mr. Earle had mastered a grand difficulty in surgery, than that Mr. Colles had made the same statement with himself from accurate dissections. But, no: because Mr. Earle has attempted an improvement on the old, and confessedly unsuccessful practice, he must be answered in generalities which mean nothing, because Sir Astley's frequently repeated and unavailing trials of all that his mind could suggest, seem not to have included, nor even approached to this method of Mr. Earle. The only shadow of a reason which Sir Astley has given against Mr. Earle's practice is the following:

"My belief is, that it is wisely ordained by nature, that this and the other bones I have mentioned—the patella, olecranon, and extremities of bones within the articulations—should not,

as a general rule, unite by bone; for I find that if the neck of the thigh bone be shortened, and falls towards the shaft of the bone, the person is unable to move his hip-joint, and becomes, what is vulgarly called bed-ridden; the cause of this is easily explained; for when the cervix is shortened, the trochanter falls upon the acetabulum, and the play of the thigh-bones become (*becomes*) destroyed. In an ossific union of the cervix femoris, if such should ever occur, as the neck of the thigh-bone is greatly shortened very soon after the accident, the same effect would be produced, and the play of the limb be destroyed; more especially when the callus, by which union would be produced, must occupy a considerable part of the acetabulum, and the patient's state would probably be much worse than in that of ligamentous union."—Cooper, pp. 31-2.

Here Mr. Earle and Sir Astley are at issue with respect to the shortening; as Mr. Earle says it is extremely little and sometimes none. This point should be clearly settled, before nature is accused of acting either for or against the advantage of the patient. We confess that we are too dull to see the distinctions pointed out by Sir Astley between his patients who have shortened limbs united by ligament, and Mr. Earle's who have not shortened limbs united by bones; for if the fracture be firmly united in any way when the limb is shortened, we should think from Sir Astley's own showing, that the patient would be bed-ridden. We would ask also how the principle applies to the patella?

Treatment.—"The treatment which ought to be pursued in fractures of the upper part of the thigh-bone is as follows: in fractures within the capsule, the limb is to be placed over a pillow, bent under the knee, from a fortnight to three weeks, until the inflammation in the joint, and the irritative fever have subsided: and when the patients are able to rise, the sooner they use the crutches the better, because the more quickly do they recover. They are to bear gently on the foot at first, and gradually more and more, until the ligament becomes thickened and the muscles increased in their powers, so as to enable them to walk with a stick; a high-heeled shoe is next advised them, by which the halt is much diminished; and then, if the person be not of great weight, the stick may be discontinued."

Cooper, pp. 33-34.

Sir Astley here promulgates his law of treatment without a single allusion to the practice recommended in the work he is analysing. We confess that this appears to us very singular. When Mr. Earle has attempted to shew that Sir Astley's practice is imperfect, and has proposed an improvement, we should

certainly expect Sir Astley to say something on the one side or the other. Instead of this, we find only a didactic and dictatorial statement of his own practice. We are sorry we cannot make Mr. Earle's method quite intelligible without plates, and must content ourselves with what he considers his apparatus capable of performing.

"In treating these cases, it is essential to consider them as if the fracture existed between the pelvis and thigh; and so to connect the two that they become like one body, and move together. The other indications are to keep up moderate permanent extension, and to take care that the limb is in every respect in its proper relative situation, not only as to length, but direction." "More extended practice in these cases convinced me, that the most desirable objects to be attained were an *easy, comfortable position, which could be endured for a considerable length of time*, even by persons advanced in years and emaciated; some contrivance to facilitate the operations of nature, and admit of strict attention to cleanliness, without allowing the slightest movement of the pelvis; and lastly, a plan for maintaining the limb in its proper situation, more by position than any forcible counter extension, which, in very old persons, is often productive of more injury than good. The plan which I now have the honour to submit to the profession, will, I believe, be found to fulfil all these indications. It is at once simple and easy of application; it can be endured for an indefinite length of time, which is very essential in treating fractures within the articulation, which require several months for perfect union; it is fully adequate to maintain the pelvis quiet, and to extend the limb; and lastly, the expense is very trifling. Pretty ample experience for two years and a half has only tended to confirm me in its great utility, and has enabled me to speak with confidence of its efficiency, not only from my own practice, but that of my professional friends." "It unites the ease of the relaxed state of the more powerful flexor muscles, with the security of permanent extension, and at the same time affords the most comfortable position for the head and trunk, allowing the greatest facility for ingestion and dejection, and leaving both arms perfectly at liberty." *

EARLE, pp. 103-125.

We must again repeat our surprise that Sir Astley has not taken the slightest notice of Mr. Earle's apparatus. Has he ever seen it? Has he ever known it tried by any of his surgical friends? If not, we think that he ought, for the honour of sci-

* "This apparatus was rewarded by the Society of Arts, &c. with their large gold medal, and is described in Vol. 39 of their Transactions." EARLE, p. 125, Note.

ence, to lay aside all prejudice, and give it a candid trial. This will be a much more useful contention than keeping up a verbal or a personal dispute.

Although our readers may probably think from the part we have been forced by truth to take in this article, that we are not disposed to give Sir Astley Cooper fair play; we must rebut the suspicion by referring to our previous reviews of his works in this Journal,—the high character we were there led to give of his book (see *Quart. Journ.* No 17, p. 101, &c.) being precisely what we still think of it; and exactly what we would now say of it, were it under review. We think very differently of the present work; and we have done him every justice in allowing him to speak largely for himself. If our inferences from the passages quoted appear to be unfair, let the blame be on us, and let truth be the gainer.

Mr. Averill's Operative Surgery*.

It is a bad rule to estimate a book by its size and price, as a manual may often contain more useful, and even more detailed information, than a ponderous quarto of wire-drawn paragraphs. We may instance the subject of Morbid Anatomy as treated by Baillie† and by Monro; or Cutaneous Diseases, by Bateman, and by Alibert; or still more to the point, the Dictionnaire de Medicine, and the Dictionnaire des Sciences Medicales. We do not mean, however, to beat about for a counterpart to Mr. Averill's modest and handy little work, but to come at once to the useful things which he has had the ingenuity to store up in a very small compass. It is most true that the art of performing the operations of surgery, can neither be learned by a mere spectator nor acquired by any prescribed rules, without actual and frequent practice. The ultimate benefits of any surgical operation, must, of necessity, depend greatly on the dexterity of the operator, and any failure from a deficiency in this respect, is not less disgraceful to him, than unfortunate for his patient. The importance therefore to the student, of actual practice on the

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* A Short Treatise on Operative Surgery, describing the Principal Operations as they are practised in England and France, designed for the Use of Students in Operating on the Dead Body. By Charles Averill, Surgeon, Cheltenham, F.R.C. London, pp. 172, 12mo. Jackson, London, 1823.

† The lamented news of Dr. Baillie's death just reached us as this sheet was sent to press.

dead body, cannot be too highly estimated. If the surgeons of France retain, in any respect, the superiority they were formerly acknowledged to possess over those of this country, it is as operators only; which can alone be accounted for, by the attention paid in the French Medical Schools, to the practice of operating on the dead. This branch of the science seems to be less insisted on, than might be wished or expected by most English students in the dissecting room. It is usually taught in this country as collateral to the courses of anatomical lectures, only a few of which are devoted to the subject. While the practical knowledge is chiefly obtained from cases furnished by the hospitals.

Mr. Averill, to remedy, in some degree, this glaring deficiency in our medical schools, has drawn up this excellent little work as a practical guide to students and young practitioners; and in order to give us, as far as he can, all the advantages possessed by our neighbours, he has carefully noted the novel modes of operation adopted in France, chiefly by M. Lisfranc of the Hospital of la Pitié, at present one of the most eminent operators in Paris. As the author had the advantage of studying under M. Lisfranc, and performing under his direction all the operations which he has described, either on the living or the dead subject, we think, we cannot give our readers any thing more interesting than an account of some of these.

Œsophagotomy.—When any foreign substance is lodged in the œsophagus than can neither be withdrawn by the fingers nor forceps, nor pushed onwards to the stomach by the probang, but continues to prevent deglutition, and by its pressure on the back part of the trachea or larynx threatens suffocation, an operation for its removal becomes requisite, which M. Lisfranc recommends to be thus performed.

The patient should be seated in a chair, with his head reclining backwards on the breast of an assistant; the operator placing himself in front, takes the scalpel or bistoury, and holding it like a pen, commences his incision on the inner border of the left sterno mastoid muscle, opposite the superior edge of the thyroid cartilage, and continues it down to the lower edge of the cricoid. An assistant now draws the carotid sheath to the outer edge of the wound, to secure it from the knife, while the operator, cutting carefully through the cellular tissue, exposes the œsophagus, where it inclines to the left side from behind the trachea. A canula with a grooved stilet, or the sonde à dard formed like a female catheter, but considerably longer, is to be passed by the mouth down the œsophagus, inclining its point to the left side, which causes it to be readily felt from the external wound. The stilet is now to be pushed forwards through the

coats of the the œsophagus, when the operator feels with his finger along its concave edge, to ascertain that no large arterial branch be situated on it, and then passes a bistoury into the groove, which directing it onwards opens the œsophagus. He now feels for the foreign substance, which is to be extracted by a pair of dressing forceps passed along his finger.

During the operation, an assistant should carefully sponge away the blood after each cut of the knife, and should any arterial branch be divided, though little hemorrhage followed, it should be immediately secured, or it would render the operation much more tedious and obscure. The edges of the wound are to be approximated and a light bandage applied. The patient is to be kept at rest and no nourishment given him by the mouth for a few days, but his strength must be kept up by nutritious clysters.

Removal of a Part of the Inferior Maxillary Bone.—This operation has been performed with complete success by M. Dupuytren, Surgeon to the Hotel Dieu in Paris: the whole of the chin was the part taken away. I am not certain as to the nature of the disease for which the operation was had recourse to; but it appears that it may be required for exostosis, necrosis, or a cancerous affection of the bone. Each of these diseases would perhaps call for a slight variety in the operation, according to the circumstances of the case.—*(See below in our Encycl.)*

The following is the method in which M. Lisfranc recommends it to be practised on the dead subject.

The body being placed on its back, with its head lowered and chin elevated, an assistant takes hold of one side of the lower lip between his thumb and fore-finger, while the operator, standing behind the head in like manner, fixes the other. An incision is then made from the middle down to the os hyoides; if it be only the chin that is to be removed this cut will be sufficient, but if a larger portion be to be taken away, another will be necessary, made along the anterior part of the bone so as to form a cross. The skin, which adheres firmly, is to be dissected back on both sides, and the bone denuded, by dividing the periosteum with the knife, at the part to be sawed through. M. Dupuytren directs the periosteum on the posterior part of the bone to be cut, by thrusting the knife upwards behind it, and turning its edge towards the bone; but M. Lisfranc objects to this, as it may probably wound vessels which, in the living subject, would furnish considerable and even dangerous hemorrhage.

The saw is now to be applied, and the bone, being steadily fixed by an assistant, sawed through obliquely, that it may come in perfect contact with its opposed portion, which is to be

cut through at the corresponding point. In order to avoid wounding the nose or upper lip while sawing through the bone, those parts should be shielded from the teeth of the instrument by a pad of soft cloth. The division of the bone being effected, its separation from the soft parts is to be completed with the knife. The hemorrhage produced by such an operation on the living subject, should be suppressed by drawing out the tongue, seizing with a tenaculum such arteries as can be detected, and securing them with ligatures, after which, if blood still continues to flow from invisible sources, the actual cautery is directed to be applied. The extremities of the bone are then to be placed in perfect coaptation, and the edges of the wound brought into contact; pads of lint are to placed so as to produce compression, and the whole kept together by a roller judiciously applied. Previous to the operation it will be requisite to extract one or two teeth on each side, at the part where the bone is to be sawn through.

Puncturing the Pericardium.—M. Boyer, in his Traité des Maladies Chirurgicales, observes: when without swerving from the path of prudence it is thought necessary to perform this operation, the method recommended by M. Skielderup, Professor of Anatomy at the University of Christiana in Norway, should be preferred, it being less hazardous than any other. It consists in making a crucial incision through the integuments, removing a portion of the sternum by means of the trephine, and then puncturing the pericardium. The operation is directed to be performed, immediately below the part where the cartilaginous portion of the fifth rib unites with the sternum. Here the approximating layers of the two pleuræ leave an intervening triangular space, which is part of the anterior mediastinum, situated a little more to the left, than to the right, and which is filled by cellular membrane; its apex rising as high as the fifth rib, its base resting on the diaphragm. Thus, after having trephined the sternum at the part above mentioned, the pericardium may be opened without wounding the pleura; consequently the chest will not be penetrated. The crown of the trephine used should be of sufficient size to leave an opening in the sternum, the dimensions of which will admit the left index finger; this finger at the same time that it discovers the part at which fluctuation is most discernible, serves as a conductor for the bistoury, with which the pericardium is to be punctured. After having cut through the bone of the sternum, the condensed membrane or ligament lining its inner surface, will offer considerable resistance to the crown of the trephine, which should then be laid aside, and the adhesions divided by the bis-

toury. Should any hemorrhage follow, the operation should not be continued until it has ceased. Before making the puncture in the pericardium the body of the patient should be inclined forwards.

M. Richerand has supposed it possible to perform a radical cure for dropsy of the pericardium, by making a large opening in the sternum, opposite the heart, and incising a portion of the membrane, between the layers of which he conceives the atmospheric air would be a sufficient stimulant to excite adhesive inflammation.

Lateral Operation for Stone with the Lithatome Caché.—This instrument, generally employed by French surgeons, is recommended to be used as follows. The patient is to be placed, and the operation proceeded with as before, till the staff is laid bare, the operator keeping the nail of his left index finger resting in the groove. He then takes the lithatome caché by the handle, its blade being properly set, and passes it along his finger until its beak enters the groove of the staff, which is proved by making its point pass backwards and forwards along it. Now, rising, he takes hold of the staff with his left hand, and whilst he depresses it so as to make it perform a semi-circle, pushes the lithatome along the groove into the bladder, and then withdraws the staff. The instrument being in the bladder is to be lifted upwards to avoid the rectum, and pressed towards the patient's right side to steer clear of the left pudic artery. These cautions being observed, and the concealed blade so inclined that in coming forth it will cut the prostate downwards and outwards, the handles are to be approximated, the blade raised, and the gland being cut as just directed, the instrument is to be withdrawn in the direction of the external wound. The forceps may then be introduced along the finger; though M. Lisfranc recommends the introduction of a grooved conductor in the form of a blunt gorget He directs it to be passed with its convexity upwards, and when in the bladder to be reversed, and the forceps introduced along its concavity: it is then to be withdrawn in the same manner as it entered, with its concave side downwards, and the stone felt for and extracted as before.

On the Operation for Stone on the Female.—In the rare cases in which it is found requisite to perform the operation on the female, it is generally done in the following way.

The patient being securely bound, a straight conductor or staff is passed by the urethra into the bladder, with its groove directed obliquely downwards and outwards towards the patient's left side, the back or convex part being pressed upwards in an opposite direction, in order to enlarge the caliber of the

urethra. The operator, holding the staff with his left hand, passes a probe-pointed bistoury along its groove, which cuts through the urethra and neck of the bladder in the first named direction. He then withdraws the instruments and introduces his left index finger to feel for the stone, which having found, he passes his forceps, his fingers serving as a director, and extracts as before.

M. Lisfranc recommends the incision through the urethra and neck of the bladder to be made upwards, inclining it slightly to either side to avoid the symphysis pubis. By making the cut in this way, he says, incontinence of urine is not so frequent a consequence of the operation as when the urethra is divided downwards and laterally. Should the opening be not sufficiently large to allow the stone to pass, he directs another incision to be made downwards, and a little inclined to one side, by which means the largest calculus the pubes will admit, may be extracted.

Castration.—M. Lisfranc, after the first incision, recommends the tumor to be dissected from below upwards, which prevents the blood collecting before the point of the knife in the cellular texture of the scrotum. He secures the cord from slipping within the ring, by directing an assistant to place his index and middle fingers at a distance from each other behind, and his thumb before it, opposed to the interspace; he thus presses it against each finger, which prevents the possibility of its being retracted; he then cuts through it, and ties such vessels as require ligatures.

Vincent Karn, a German surgeon, recommends the operation to be thus performed An assistant with the fore-finger and thumb of one hand takes hold of the cord, with the integuments, above the part where it is to be cut through, whilst with the other he separates the diseased from the healthy testicle. The operator then raises the one diseased, and by a single stroke of the knife cuts it away with its scrotal covering, beginning the incision at the raphe of the scrotum and cutting obliquely upwards and outwards. The arteries being taken up and the edges of the wound approximated, the operation is finished. This method has the advantage of being short; but as in many cases the testicle is too much enlarged to admit of being removed at one cut, and as the cord cannot be securely fixed by being pinched up within the integuments, the former must be considered the safest plan of performing the operation.

When the disease extends along the cord, it is cruel to submit the patient to the unnecessary pain of the operation: though M. Lisfranc says in cases of this kind he has seen

M. Dubois pull down the cord and then divide it, and M. Dupuytren cut up the inguinal canal to the internal ring, and there cut through the cord; but in all the cases the patients have died.

Again, it is a matter of opinion whether it is not the better plan to secure the whole cord by ligature, and thus do away with the necessity of tying each vessel separately. M. Richerand practises the operation in this way; but cases are related in which a ligature, including the whole cord has produced such excessive pain and irritation as to necessitate its removal: the tying of nerves, and veins too, has sometimes produced fatal consequences, therefore the method of securing each vessel separately appears to be that which may be most safely pursued.

Amputation of the Second, or Third Phalanx of a Finger.—With us this operation is generally performed by making a circular incision round the finger, about a quarter of an inch nearer its extremity than the joint at which you are about to amputate; then an incision on each side, extending back from the first to the second joint, so as to form two flaps, which are to be dissected back, and the tendons, with the lateral and capsular ligaments cut through, which finishes the operation.

The following is the process adopted by M. Lisfranc, certainly more expeditious than the former; but as it leaves only a single flap, it is not probable that the wound will heal so readily by adhesion as when the operation is performed in the manner already described; yet a case might possibly occur, in which the one operation could be performed, and the other not be practicable.

The hand being prone, is fixed by an assistant, who bends the other fingers and separates them from the one to be operated on. The operator, with the fore-finger and thumb of his left hand, takes hold of the phalanx to be amputated, placing his thumb on its dorsal, and his finger on its palmar surface, and having half bent it, observes the situation of the small fissure in the integuments on the side of the bone caused by that position; immediately before which the joint will be found. At this point, with a straight bladed bistoury, he makes his incison, and at one sweep lays open the joint by cutting through the integuments and ligaments on the sides of the dorsum of the finger, from left to right. In cutting the ligaments at the sides, the edge of the bistoury is directed obliquely towards himself, and those on the dorsum in the opposite direction. The phalanx is now to be held by its sides, and the ligament at the under part cut through; the bistoury is then placed horizontally with regard to the pha-

lanx, and a flap of sufficient length formed from its palmar surface by cutting between the integuments and bone.

In cases where the finger is so much swollen as to render demiflexion difficult and painful, M. Lisfranc recommends the operation to be reversed, and performed thus:

The hand being supine and fixed by an assistant, the operator extends the diseased finger, and bends the others, that they may be out of the way of the knife. He then takes hold of the phalanx with his left hand, placing the thumb on the palmar, and fore-finger on the dorsal side, while with his other fingers, he forms a support for the bistoury; which is to be introduced horizontally, immediately anterior to the fissure, in a line with the joint, and pushed through beneath the integuments to the opposite side, the point being directed obliquely upwards to avoid the bone, when a flap is to be formed by cutting forwards and outwards. This being done, and held back by the assistant, the heel of the bistoury is applied to the base of the flap; when, by drawing it from left to right, the joint is cut through, which removes the phalanx. In operating in this way at the second phalanx, the point of the bistoury should be passed immediately under the fissure formed in the integuments on the palmar surface. No ligature will be required for the divided vessels; pinching their bleeding extremities with the forceps being sufficient to stop the hemorrhage.

Amputation at the Wrist Joint.—The following is M. Lisfranc's method: The tourniquet being applied, and the fore-arm fixed by an assistant with the hand prone, the operator places his two index fingers above the joint, one on the radius, the other on the ulna. He then bends and extends the hand, whilst doing which he draws his fingers down the bones till he feels the styloid process of the radius, on the extremity of which he places the fore-finger of his left hand, and his thumb on the corresponding point of the ulna, if it be the right hand to be removed, and the reverse if it be the left. With a catling he makes a semilunar incision through the integuments, with its convexity towards the hand, beginning at the point before the thumb, and ending at the opposite one. Then, directing the point of his knife obliquely downwards, he cuts through the ligaments on the ulnar side, and by depressing the handle, continues his incision through the tendons and ligaments on the dorsum to the styloid process, at the same time bending the hand so as to expose the articulatory surface of the bones of the wrist. Having glided his knife through the joint, and divided the capsular ligament, and tendons below, he forms a flap of the integuments, of suffi-

cient length to cover the stump, from the palmar surface, by cutting towards himself, taking care to avoid the pisiform bone.

The latter operation may be reversed and performed thus: Having found the extremities of the radius and ulna as before, place the forearm in a state between pronation and supination, and thrust the point of the catling beneath the integuments from the anterior and inner edge of the ulna, till it appears just before the styloid process of the radius, and form a sufficient flap by cutting towards the palm. Then cut through the integuments and tendons on the dorsal side, and finish the operation by cutting through the joint, from before the styloid process of the radius downwards.

Three arteries generally require to be secured after this operation: the radial, the ulnar, and the interrosseal. The cut surfaces are to be approximated by adhesive plaster and the arm kept in a sling.

Amputation of the Elbow Joint.—Though the stump after this operation is not more useful than when the amputation is performed at the lower part of the humerus, and though the healing process is no longer protracted, yet it has been performed by M. Dupuytren in Paris. M. Lisfranc relates that in one case of which he was a witness, the wound was several months before it was completely healed.

The following is the method of operating adopted by M. Dupuytren:—

The brachial artery being compressed by the tourniquet, and the extremity fixed by assistants above and below the elbow; the operator thrusts a catling beneath the integuments and muscles of the forearm, just below the condyles of the humerus, at the bend of the elbow, and forms a flap three inches in length, by cutting towards the hand. This flap being held back, he cuts through the integuments and muscles on the posterior side of the arm, by an incision level with the extremity of the olecranon. Then feeling with his left thumb for the head of the radius, he separates it from the humerus by directing his knife obliquely between the two bones, and removes the ulna by cuting round its sigmoid cavity, taking away as much of the capsular ligament as possible. The bleeding vessels being tied, the condyles of the humerus are covered by the flap, the edges of the wound approximated by adhesive plaster, and a bandage applied.

Amputation at the Shoulder Joint.—M. Lisfranc recommends the following method, which, if dexterously executed, is certainly the most expeditious; it however requires considerable practice to accomplish it skilfully.

Supposing the left extremity is to be removed; the patient is placed on an elevated seat, one assistant pressing the artery above the clavicle on the first rib, whilst another draws the arm forwards. The operator, standing behind the patient with a long bladed catling, pierces the integuments on the inner edge of the latissimus dorsi muscle, opposite the middle of the axilla, and pushes it obliquely upwards and forwards, till its point strikes against the under surface of the acromion; then by raising the handle of the knife its point is lowered, and protruded just before the clavicle, at the part where it joins the acromion. He then, by cutting downwards and outwards, forms a flap from the superior and posterior part of the arm, including the whole breadth of the deltoid muscle, and a part of the latissimus dorsi. This being held back by the assistant, the joint is cut through, by passing the knife between its articulatory from behind forwards, and a corresponding flap is formed by cutting downwards and outwards between the muscles and bone on the inner side of the arm. The vessels being tied, and the flaps placed in contact with each other, the operation is finished.

In operating on the right side, the patient should be seated on a low chair, and the catling thrust from above downwards, introducing it just before the point where the clavicle is connected to the acromion, and raising the hand backwards and downwards, till it appears on the inner edge of the latissimus dorsi, when the flap is to be formed, and the operation continued as before.

M. Richerand observes "by this method a dexterous operator can separate the arm from the trunk as quickly as an expert carver detaches the wing of a partridge."

These specimens of Mr. Averill's work will show that it is an extremely useful compendium, which no student or junior surgeon ought to be without. We should be glad to see this author treat some other professional subjects in the same compendious and scientific way. There is still a most ample field—notwithstanding the numerous publications which appear yearly from our press.

Encyclopaedia Medica,

OR

A QUARTERLY HISTORY OF IMPROVEMENTS AND DISCOVERIES BOTH AT HOME AND ABROAD,

IN

Anatomy,	Surgery,	Materia Medica,
Physiology,	Practice of Physic,	Pharmacy,
Pathology,	Midwifery,	Chemistry,
Morbid Dissections,	Forensic Medicine,	Botany, &c.

Forming a useful Library of Practical Reference.

I. ANATOMY.

1. M. L. L. Jacobson *on a Humour of the Eye little known.*

We have had more than one occasion to mention the researchcs of M. Jacobson, of Copenhagen, who thinks he has reason to conclude—that a serosity or watery humour naturally exists between the choroid coat and the retina, and contained in a duplicature of the latter; that a minute portion of the same humour also exists on the corresponding anterior part of the retina; that this humour sometimes accumulates in so great quantity as to push forwards the retina and the vitreous humour, and to produce the disease, called by Scarpa, *Staphyloma posterior*, by distending the choroid and sclerotic; and that this humour can be displaced by a calculous deposit, which is usually, and erroneously, considered as an ossification or petrefaction of the membranes of the eye and of the vitreous humour.

(*Nye Hygeie, Copenhagen.*)

2. Professor Isenflamm *on the Constituents of Tendons.*

The School of Erlangen appears to be rising into respectable notoriety. Professor Isenflamm, one of its ornaments, has instituted some experimental researches into the chemical constituents of tendons, and seems to have established, that they differ little from muscles, with the exception of their being destitute of salts. By carefully macerating and dissecting tendons, he came to the conclusion—That they are formed of cellular membrane, arranged in fibres, accurately parallel with tendinous fibres crossing them, and forming a membrane of animal gluten, and of albumen, from which, and the fibrous texture, the satiny appearance of tendon is produced. He decides that nerves enter into their structure, whether they can be traced or not, from their sensibility when diseased; for, according to the Professor, no vital property, such as the nervous, can be generated, though it may be developed by a morbid state of the parts.—(*Archives de Médecine.*)

3. M. LISFRANC *on the Uvula.*

In an excellent paper on the Anatomy, Physiology, and Pathology of the Uvula, M. Lisfranc regrets that he could find little precise and scientific information concerning it in systematic works. The dimensions of the uvula are various. He has seen two subjects in which it appeared like a very short tubercle, though otherwise voluminous. In another case he found it of its ordinary length, but as fine as a thread. These circumstances he thinks could have but little influence on the voice. Hagerdorn, in the *Ephèmèrides des Curieux de la Nature*, gives the case of a girl born without a uvula, in whom the voice was unaffected and natural. In the same work Vallgnadius mentions a bifid uvula, in a subject who at the same time had hare-lip. Both Roux and Lisfranc himself have observed similar cases. It is wanting in all animals but man; careful dissection proves that the uvula, when very thin, and represented in a tubercle, is wholly composed of mucous membrane and a great number of follicles; and the bifid state, or the absence of the palato-staphylini muscles in its thickness, will cause its descent. The uvula is formed by these muscles, whose supporting fibres (*les fibres adossées*) separate as they approach it, and their prolongation is covered by a mucous membrane enclosing a greater quantity of follicles than has been hitherto pointed out. Under this is a close (*serré*) cellular tissue, studded with small glands, whose organization resembles that of the tonsils, and the thalamus of the crypta agglomerata, found under the mucous tissue of the velum pendulum palati in the horse and other animals. The free extremity of the appendix appears to be destitute of muscular fibres. Here M. Lisfranc has repeatedly found three mucous follicles much developed, very distinct, and susceptible of augmentation, to about a third of the usual length of the uvula. M. Boyer has observed upon this point a small transparent tumour produced by the accumulation of serosity. Frequently the appendix is soft, chiefly towards the top, and makes a similar structure to that of the nasal polypi of the mucous membrane. It is needless to say that it may become schirrous, carcinomatous, and even cartilaginous, and that it is often in a state of procidentia.

(*Revue Medicale.*)

II. PHYSIOLOGY.

4. M. LISFRANC *on the Uvula.*

We continue the interesting paper of M. Lisfranc, by giving his physiology of the uvula. The remark of Hagendorn opposes the conclusion that the uvula concurs in the formation of the voice; and many patients who have had it removed by operation, show that it has but little influence on the articulation of sounds. Many physicians know that venereal ulcers have destroyed both the uvula and the pillars of the velum, as well as the epiglottis, in distinguished comedians, and that notwithstanding the character (*timbre*) of the voice has lost nothing of its pliancy and freshness. If syphilis alters the voice, says M. Biett, by the destruction of the uvula, it is not so much the want of the uvula as the deep morbid taint which the disease has given to the rectum and the parts in its vicinity, and which is beyond the reach of cure. Our author believes with Richerand, that the uvula is destined to advertise the pharynx of the arrival of ailment; and that it furnishes from its numerous follicles, mucus to facilitate the passage of the food. M. Lisfranc, besides, thinks he has discovered and proved that the uvula serves to prevent the nasal mucus from falling into the glottis. Its movements in this point of view may be seen by opening the mouth before a mirror, and strongly drawing in the breath.

The strongest proof of this, however, is, that when a complete case of procidentia occurs, or when it has been entirely removed, the nasal mucus very readily gets into the glottis during a slow and long drawn inspiration.—(*Revue Medicale.*)

5. Segalas D'Etchepare *on the Action of the Chlorate (Oxymuriate) of Soda on several Animals.*

This substance has already been proved to be very efficacious in destroying infectious effluvia. It has also come into use in several hospitals, and even amongst some practitioners as a detersive application to ulcers of different kinds, and particularly to those of a venereal nature. Several experiments on dogs have been made to prove its power over the animal economy. The effusion of a dram of the solution on the denuded pectoral muscle caused severe pain. An ounce of the liquid injected into the stomach of a large dog produced immediate vomiting, &c. so as to reject the whole of the substance. Two ounces of the liquid were then introduced into the stomach of the same animal by an opening made in the œsophagus, and retained by a ligature; he made repeated efforts to vomit. Having survived the operation, he was killed twenty-four hours afterwards. The stomach was found inflamed throughout with the exception of a small portion near the pylorus.

In some of the animals killed, the veins were filled with blood of a less deep colour than usual, and there was a strong disposition in the muscles to contraction. The conclusions from these experiments are, first, that the chlorate of soda ought to be reckoned amongst the class of irritating and corrosive substances. Secondly, that the solution (the solution employed was one marking twelve degrees of the aërometer) besides its direct and sympathetic action on the solids, exerts by absorption a manifest action on the blood. Thirdly, that it ought to be used with extreme caution on denuded surfaces, and especially on the parts of generation.

The chlorate of soda is rarely employed pure, but diluted with six or eight parts of water, when it becomes much less irritating.

(Magendie's *Journ. de Physiologie.*)

6. M. Edwards *on the Carbonic Acid Gas of Respiration.*

Our indefatigable and scientific correspondent M. Edwards has communicated to the Academy of Sciences the results of numerous experiments which he has made upon the exhalation of carbonic acid gas during the pulmonary expiration. He proves, by these, contrary to the opinion generally admitted, that the carbonic acid is not formed instantaneously in the lungs by the action of the air inspired, but that this gas is a genuine secretion of the blood, made in the respiratory organs. In his interesting experiments, M. Edwards reduces cold blooded animals to respire hydrogen gas perfectly pure. This process was persevered in during many hours, as in the atmospheric air. The result was, that after this lapse of time, the presence of a quantity of carbonic acid gas became evident, amounting almost to an equal quantity, as would have been furnished, if the respiration had been conducted in the open air. This result has been frequently suspected among the numerous conjectures to which the subject has given rise; and when the memoir is published, with all its details, we hope it will do much to clear up the difficulties connected with respiration and the changes which the blood undergoes in the lungs. M. Edwards had previously discovered, that azote is absorbed into the circulation, and subsequently discharged from it; and that each of these actions is regulated by the constitution, habit, and circumstances of the individual, and by the influences to which he may be subjected, the absorption being to a small extent, whilst the exhalation is considerable, and the reverse.

7. FOVILLE & PINEL-GRANDCHAMPS *on the Brain.*

The researches and experiments of M. Flourens and Fodéra, borrowed it seems in a great measure from Roland's work, "Saggio clinico sulla vera struttura del cervello, e sopra le fonzioni del sistema nervosa," have led to many interesting facts and observations on the functions of the particular parts of the brain. Among these we may mention a case related to the Académie Royale by MM. Foville and Pinel-Grandchamps, of a female whose upper and lower extremities of the left side had been for several years completely paralysed. On examination they found an old extravasation on the right hemisphere of the brain, in the medullary space, outwardly, between the thalami optici and the corpora striata, and equally affecting these two parts. The authors stated this fact to confirm their former opinions on the seat of motion in the two limbs, namely, that the seat of motion in the upper extremity is placed in the corpus striatum. Hence it should seem to follow, they think, that when paralysis occurs at the same time in both the upper and the lower extremity, the corpus striatum and the thalamus opticus will both be found morbid.

8. M. MAGENDIE *on the Functions of the Spinal Marrow.*

In following up the novel experiments of Mr. C. Bell, M. Magendie remarks that, in general, the properties of the spinal marrow appear to reside at the surface of the part; this is at least evident as regards sensibility. If the posterior cords, covered even by their vascular membranes, be touched, we observe signs of an acute pain, and, what is worthy of remark, very marked contractions in the muscles which receive their nerves, lower down than the part touched. The contractions only shew themselves on the side of the cord which is irritated.

It would be, doubtless, very desirable to know how sensation and motion are propagated from the marrow to the brain. The anatomical disposition indicates that sensation should be directed more particularly towards the cerebellum, and motion towards the brain; but anatomy is not sufficient: it is necessary for physiological and pathological facts to confirm the indication: until the present time, however, neither the one nor the other of these means has established what anatomy seems to shew in so evident a manner. Lesions of the cerebellum do not cause a loss of sensation. Removal of the hemispheres does not necessarily induce a loss of movement; the contrary assertion, announced by M. Rolando, is not exact: this physician appears to me to have suffered himself to be deceived by an accidental circumstance. When we wholly remove the hemispheres, an effusion of blood immediately takes place, and a coagulum is formed which fills the cavity of the cranium, compresses the medulla oblongata, and produces the state of somnolency (*assoupissement*) observed by M. Rolando. But if we prevent the formation of this coagulum, the symptoms are quite different; the animals are in continual agitation; they run or fly with remarkable agility, provided they are not too much weakened by the loss of blood. The animals on which this experiment succeeds the best, are small rabbits, a month or six weeks old, and young jackdaws, or magpies, just beginning to feed alone. It is singular to see them run, leap, &c, of their own accord, after the complete ablation of every part of the brain, situated a little before the optic tubercles. But if the section be made immediately before these last eminences, every thing is arrested; the animal falls upon the side, the head is thrown backwards, the paws entirely stiff and directed forwards. I have seen young rabbits remain several hours in this position. In order to put an end to it, it is sufficient to make a section behind the optic tubercles. Immediately the anterior paws lose their stiffness, and, most commonly, become bent as well as the posterior, and the head is again brought forwards. It seems to me, to be evident from these facts, that the optic thalami, the crura cerebri, and the tubercula

quadrigemina have functions relative to motion, and these parts should be examined under this new point of view.

The effects of a partial or total removal of the cerebellum are much more difficult to observe, by reason of the great hemorrhage which always accompanies a wound of that organ, of the effusion which is the inevitable result of it, and of the compression of the spinal marrow, I have not yet been able to assign to each of these effects, the part it takes in the phenomena which occur at the time of wounds or ablation of the cerebellum: it is easy, however, to prove, that profound lesions of the cerebellum, and total ablation of it, do not cause the loss of sensation. The experiments of Larry, Legalois, &c., have, besides, demonstrated that this quality is inherent in the spinal marrow. It is to be hoped, that this difficulty will be soon removed, for several zealous individuals are occupying themselves with researches on this point, and I am myself using all my endeavours to arrive at something satisfactory on this important question.

What I have hitherto remarked most constantly is, that the cerebellum seems necessary for the integrity of the forward motion. Every triflingly severe wound of the cerebellum totally prevents progression, and most commonly developes, on the contrary, a set of movements which belong to the action of retrogression. A duck, from which I removed a great part of the cerebellum, could swim backwards, and made no progressive movement for eight days.—(*Journ. de Phisiol.*)

III. PATHOLOGY.

9. Desmoulins *on the Discolouration of the Skin in Yellow Fever.*

M. A. Desmoulins has laid before the Institute a paper on this subject, in which he has come to the following important conclusions:—

1st. That there is not in yellow fever any encreased secretion of bile. 2d. That both the black coloured substances vomited and evacuated per anune, are exhalations from the coats of the intestines. 3d. That the yellow colour of the skin takes its rise from an elaboration of the blood, in the corpus mucosum of the skin, in which a sanguineous congestion is established by a determination, simultaneous with, and analagous to, that which produces the hemorrhage from the mucus membrane of the intestines. 4. That the more dense structure of the cutis is the only reason why hemorrhage does not take place from it. 5th. That the yellow tinge of the skin is merely a species of ecchymosis. 6th. In a word, that the yellow fever is nothing else than a determination of blood to the skin and mucus membranes, the effects of which are diversified on these surfaces by the different degrees of the intensity of the determination combined with the unequal permeability of the membranes.

These different propositions are supported by a number of ingenious, and, in many cases, conclusive arguments, of which our limits will only admit an outline. In several cases where the black vomit had occurred, the stomach, after death, was found filled with the same matter, while the pylorus was entirely obstructed by schirrus, proving that water could not come from the liver; nay, Dr. Ffirth discovered this dark substance completely formed in the arteries of the stomach. Authenrieth, and several others, have observed the serum to be yellow in diseases free from any biliary complication; in the bodies of children who were born with the yellow gum, no indications of hepatic disease could be discovered, nor in a case of this kind, examined by M. Lassaigne, could the least trace of bile, or of any of its elements, be found either in the serum or the fibrine, or in the coloured particles of the blood. Some old men have become yellow, and yet enjoyed good health; and

some nations have a permanent yellow tinge. This colour cannot, therefore, in all cases be the effect of bile, and in the yellow fever is most probably owing to the elaboration of the blood in the corpus mucosum Malphigi.

In conclusion, M. Desmoulins thinks he can perceive a conformity of the symptoms of yellow fever with those in the diseases produced in dogs, in the experiments of M. Gaspard, by the transmission into their veins of the fœtid juice of fermented cabbages. This resemblance he traces still farther, viz. to the symptoms on dissection, and from thence is led to deduce a similarity of origin in both diseases, namely, the introduction of putrid substances into the mass of blood. This analogy of symptoms and origin, of course, extends not only to yellow fever, but to typhus, to intermittents from malaria, and to all diseases supposed to take their origin from putrid exhalations.—(MAGENDIE'S *Journ. de Physiologie.*)

10. MM. LARREY AND ROUX'S *Case of Excreted Intestine.*

In a report to the Académie Royale, upon a paper by MM. Bouniol and Rigal, junior, entitled Intus-susceptio intestinalis, followed by an excretion of about thirty inches of small intestine and a portion of mesentery,—MM. Larrey, Roux, and Beclard, state, that the patient had been subject to great indigestion, and at last was affected with all the symptoms indicating internal strangulation. There were complete suppression of the alvine evacutions, stercoral vomiting, sharp pains in the abdomen, and an elevated tumour very sensible to the touch in the right iliac region. In the course of twelve days, at the termination of a violent fit of colic, he voided by the anus a portion of intestine and of mesentery. From this moment his amendment was rapid, his health was restored, and there remained no other inconvenience than a slight feeling of pain in the right iliac region. About three months afterwards, the patient having eaten a very great quantity of cherries, was seized with symptoms of peritonitis and died; but the body was not inspected. M. Larrey thinks that a portion of the intestine must have been invaginated, strangulated, and seized with gangrene, separated in consequence from the living tissues, and thrown into the great intestines, whence it was ejected. In wounds of the intestines M. Larrey has seen them re-united as neatly as if it had been done by the suture of a glover. Two pieces of intestine, indeed, unite most readily, as M. Larrey has demonstrated by experiments on dogs.

11. M. FERRARI, of Xeres, *on Yellow Fever.*

Notwithstanding the numerous Memoirs which have appeared on the epidemic fever of Spain, we do not recollect of seeing it explained on the Broussaian system before. M. Ferrari concludes, from what fell under his observation, that the yellow fever is a phlegmasia of the gastric and hepatic system, and not an essential fever! That it arises from some poisonous sort of miasma; and that this miasma or contagious poison is the effect of a union of certain causes and no other, excited by a certain degree of heat! That the degree of heat is only a necessary condition, but not the exciting cause; that as in the city of Xexes there does not exist, nor ever has existed, that union of circumstances necessary for its production, it is not therefore spontaneous, but has been imported as often as it has been experienced; that considering the mode of attack, communication and propagation in the city of Xeres, it appears to be contagious; and that, although it is certain that contagion alone, and not heat alone, may re-produce the yellow fever, this reproduction is neither so frequent nor so easy as is supposed.—(*Edinb. Journal.*)

12. MR. SWAN *on the Causes of Apoplexy.*

In giving the history of four cases of apoplexy, in which emetics appeared to have been exhibited with advantage, contrary to the very general opinion of this practice being dangerous, Mr. Swan takes occasion to remark, that apoplexy

depends more frequently on the difficult transmission of blood through the lungs, or from its not being properly organized, than is imagined. A stomach overloaded by wholesome food, or containing a small quantity of indigestible food, deranges all the parts to which the branches of the par vagum are distributed; and therefore the lungs do not perform their functions; in which cases, though bleeding is absolutely required, the quantity of blood may be taken away without affording complete relief; therefore, if a person is seized with apoplexy, and bleeding has not afforded relief, and there is no symptom of paralysis, and it is probable the stomach contains undigested food, it is advisable to give an emetic.

(*Edinburgh Journal.*)

13. M. Dommanget *on Small Pox.*

Dr. Clutterbuck will be *ravi* to see that M. Dommanget's dissections tend to support his theory of fevers. In several cases of small pox, M. Dommanget found the membranes of the brain either inflamed, in a state of adhesion, and injected or covered with effused matter. The brain itself was either softened or its substance injected. The lungs were sometimes hepatized and sometimes engorged. There were adhesions and inflammations of the pleura with albuminous affections; and the stomach and intestines were usually inflamed.—(*Journ. Général.*)

IV. MORBID DISSECTIONS.

14. *Ulceration of the Cæcum.*

A gentleman of good family attended the King on his tour to Scotland last year and there received a strain, apparently in the right groin, whilst jumping off a coach. Having also caught a severe cold at this time, he was laid up at Edinburgh with a large swelling in the right inguinal region, for which leeches, fomentations, aperients, &c., were used, and he got about again, so that he went shooting, and using much exercise during last winter, without any inconvenience. About the middle of May last, a swelling appeared in the same place again, and an eminent surgeon of this metropolis was consulted, and considered it to be an abscess forming, from which no danger was to be apprehended. It was opened on Sunday the 1st of June. On Monday he had a severe rigor; and on Tuesday much fever. On this day bark and other substances which he had lately swallowed, were observed on the poultice, which alarmed the patient excessively, but the surgeon did not consider it as of serious consequence, for some days, though the fæces came constantly through the wound. Till Sunday the 8th of June, M—— thought the patient was going on well; but on that day he perceived symptoms which led him to apprehend more mischief than a mere communication with the intestinal canal. A physician was called in; but the patient rapidly sunk, and expired on the 10th of June. The following were the minutes of the dsssection left with the family:—

In the lower part of the abdomen, immediately above the right groin, there was a cluster of enlarged absorbent glands connected with the abscess. The ulceration, which had taken place in the formation of the abscess, had extended into the cæcum, or beginning of the great intestines, in consequence of which there was a large opening, forming a communication between the cæcum and the external wound. The inner membrane of the intestine in the neighbourhood of the ulceration, to a considerable extent, was in a state of inflammation, being of a very dark colour, in consequence of the vessels being loaded with blood. There was no

other appearance of disease in the abdomen. In the chest, the lungs were found unusually turgid with blood; and the surface of the right lung, towards the posterior part, was covered by a thin layer of coagulated lymph. In the cavity of the pleura, on the right side of the chest, there was about six ounces of serous fluid.

(*Medico-Chirurg. Review*)

15. M. ROYER-COLLARD'S *Case of Diseased Spinal Marrow.*

A patient who had been in the lunatic asylum at Charenton for 17 years died. We were unable to obtain any account respecting the state of this man before his entrance into the establishment; during the ten first years of his stay there, he remained taciturn, lazy, being never comfortable except when in bed, and scarcely answering to the questions which were put to him; his gait was unsteady; his lower limbs were tottering; the upper extremities free, and the pulse was weak and slow. Occasionally he left his apartment, and became morose, mischievous, endeavouring to strike all those whom he met. The lower extremities becoming more and more weak, it was at last impossible for him to walk, and he remained for about seven years, with the thighs bent upon the pelvis, and the limbs upon the thighs, without executing any movement whatever of those parts, which, however, preserved their sensibility. He still understood what was said to him, but his answers were not articulate; his intellectual faculties were almost annihilated, and his existence was filled up by eating, drinking, and sometimes putting himself into a passion. His excretions were passed involuntarily. Three weeks before his death, he was seized with diarrhœa, which became more and more abundant; his pulse could scarcely be felt; his emaciation was extreme. The trochanters and perineum became excoriated.

DISSECTION.—Cranium of an ivory appearance, three times thicker than in the healthy state. The cerebral and spinal dura-mater thickened but not injected; the arachnoid healthy in all its points. The pia-mater of his brain presented nothing remarkable; that which covered the corpora olivaria and pyramidalia, as well as the anterior surface of the spinal marrow, was very dense, bluish, and dotted. This colouration was limited on each side, by the anterior roots of the spinal nerves and the ligamentum denticulatum; above, it diminished insensibly over the commissure of the cerebellum, at the superior edge of which, no more traces of it were observable, and beneath, it ended with the medulla. When this membrane was removed, the corpora olivaria and pyramidalia were found of a greyish colour, and soft like bouillie; the softening extended, diminishing progressively over the whole of the anterior part of the medulla, and into almost the whole thickness of the fibrous fasciculi which compose it; towards the encephalon it might be followed through the commissure of the cerebellum into the crura cerebri, the thalami optici, the corpora striata, and some of the cerebral convolutions, especially towards the middle part of the right lobe. The anterior roots of the spinal nerves might still be distinguished above the fasciculi from which they originate, but they had not their usual consistence. Every other part of the brain, besides those which we have mentioned, as well as the cerebellum, was in a natural state; but the commissure of the latter, which was more than ordinarily firm, contrasted, in a striking manner, with the softness of the neighbouring parts. The posterior surface of the spinal marrow, and the membrane which covers it were in a healthy state.

Nothing remarkable presented itself in the chest; a little serosity was found effused into the abdomen, and some reddish maculæ were discovered on the peritoneum; the internal membrane of the stomach was of a bluish colour, and dotted over almost its whole extent; that of the intestines presented some red maculæ. The lower extremities could not be extended (thirty hours after death, the upper were lax); but they became mobile after the section of the flexor muscles. A large quantity of synovia was present in all the articulations. The bones, with the

exception of those of the cranium, were in a natural state; it might have been believed, that the great density of these latter was owing to an excess of salts; experience, however, has shewn that it was not so. 100 parts of the thickened os frontis yielded to M. Lassaigne,

Of animal matter	42
Phosphate of lime	46
Carbonate of lime	12
	100

whilst 100 parts of a healthy os frontis, taken from a subject of the same age, consisted—

Of animal matter	41
Phosphate of lime	47
Carbonate of lime	12
	100

Does not this case tend to explain the distinct properties of the anterior and posterior parts of the marrow? It is proper to observe, however, that the motions of the arm were, in part, preserved. The latter circumstance, therefore, makes us feel the necessity of fresh examination of the anatomy of the marrow, and of its vital properties. This part is much more complicated at its superior region than any where else; and, moreover, we know nothing yet of the uses of the corpora olivaria, of the anterior and posterior pyramids, &c. M. Magendie is at present engaged in the investigation of these different points.

(Magendie's *Journal.*)

16. M. Rullier's *Case of Diseased Spinal Marrow.*

M. L——. the subject of this case, aged 44, was small, thin, and of a marked nervous temperament. His faculties were early developed, and his mind cultivated at an early period of life. Being but young when left to his own discretion, he became addicted to those irregularities which result from an indulgence of the passions. At the age of thirty-four he first experienced pain when moving his arm, attended with pain and uneasiness at the top of the vertebral column. This indisposition, the first serious ailment which he had felt, became suddenly aggravated after several remissions; and in January, 1815, he entirely lost the use of it. After this the dorsal part of the spine became curved, and his shoulders, especially the right, became elevated.

M. L. consulted some of the most distinguished physicians in Paris, who employed cauteries, moxas, and vesicatories, with little advantage. On the 5th of October, 1822, M. Rullier was called to attend him. He was then feeble and wasted. The size of his head formed a striking contrast with his small and emaciated body. His neck and extremities were long and thin. The vertebral column was sensibly curved. With the exception of the superior extremities, all the parts of the body enjoyed their voluntary motions. The patient walked about, and even shortly before his death could take several turns on the outer boulevards without fatigue. Borne up by his nervous activity, he assured M. R. that he felt strong. The arms of this patient were contracted in a permanent manner, sometimes painful, and generally aching. The fore-arms were in a state of forced pronation, and the fingers in that of flexion. During sleep, the fingers were contracted so forcibly as to mark the skin in the palm of the hand. Notwithstanding the affection of the arms, M. L. could still sign his name in his official capacity, by a movement of the whole arm. The contraction of his arms appeared to be chiefly owing to the pectoral muscles, and the contracted parts preserved their sensibility.

The hands were perfectly sensible to every alteration of temperature and to the slightest touch; and pain was excited in the arms by forcible impressions from external objects.

M. L. possessed his intellectual and moral faculties unimpaired. His sleep, however, was disturbed and broken, by difficulty of respiration and palpitation, occasioned by painful stitches darting through his chest. The thorax appeared to preserve only a part of its motions: cough was frequent and difficult, and the expectoration abundant and like cream. Hectic fever, with increase of the frequency and strength of the pulse, supervened, and was accompanied with an aggravation of the symptoms more immediately referable to the chest and lungs; the remissions of the fever were, however, marked, and attended with comparative ease. The bowels were obstinately constipated. Violent pains were felt in the lumbar region and the dorsal curvature, and the breathing became more oppressed with the accession of the hectic paroxysm. Erections continued, as they had been during his illness, and, indeed, through life, frequent, and it was only shortly before his dissolution that the patient had ceased to indulge in the re-productive act; the desire of which, with the requisite energy of the parts, continued almost until his death. The treatment which was employed before the attendance of M. Rullier had checked a gastro-intestinal irritation which had affected the patient. M. Rullier found him in a state of Pulmonary consumption supervening to the affections of the bowels, which he could not retard. And on the 31st of October, fifteen days after M. R. first saw him, he sunk under his complicated disease.

DISSECTION.—The body, opened thirty-six hours after death by MM. Piedagnel and Leconteux, in the presence of M. Magendie, who was kind enough to assist at this operation, was not as yet visibly altered, although it had remained in a warm place. Its emaciation evinced complete marasmus. The breast and superior members were on this account particularly remarkable. These last were, if I may use such an expression, glued to the body, and were contracted, as was the case before death. The legs and the feet were slightly œdematous. The vertebral column, the particular object of our examination, offered in the upper part of the dorsal region a slight saliant curvature behind and to the right, and which raised the corresponding shoulder. The rest of the back was well formed; the breast, sufficiently straight, appeared to be still more so, in consequence of the arms and the shoulders being raised and brought forward. The adipose cellular tissue had entirely disappeared. All the muscles were lank and thin; those in the lumbar region were softened and of a deep red colour. The psoas muscles presented the same colour, and were as if in a state of solution. They were not entirely suppurated nor inflamed, and we considered to what point this alteration explained the severe pains which the patient had suffered in the lumbar region, and principally to the right. The brain was firm, very sound, and contained a remarkable quantity of serum in the four ventricles, and this serum appeared to have the power of following the erection of the body into the cavity of the spinal arachnoid; at least, we could not establish the existence of a cul-de-sac formed by this membrane, and which closes on this side the fourth ventricle. Neither did the valvula of Vieussens exist. Nothing that regarded the cerebellum appeared to be worthy of remark, nor any thing that could be united with the prodigious generative activity that had distinguished the patient. The arachnoid of the ventricles was clearly distinguished; it presented a simple increase of thickness, which did not alter its transparency. The fibrous canal of the spine was laid bare throughout its whole extent, by removing the spinous apophyses and plates of the vertebræ; the marrow suffered no sort of compression in its canal; only it contorted itself as the spine did in the dorsal region. The cavity of the arachnoid contained a remarkable quantity of serum; beneath part of this membrane, united to the marrow, we found the membrane belonging to the latter covered with a great number of red vessels arterial and venous, strongly injected with blood.

The vertebral marrow, examined with care, in its place and by its posterior face, appeared to us in its natural state, from its origin as far as the fourth part of cervical nerves. The two inferior thirds of its dorsal part were equally sound; but between these two parts, viz. for about six or seven inches in length comprised between the two inferior thirds of the cervical region and the upper third of the dorsal region inclusively, and corresponding to the eighth or ninth pair of nerves, this part displayed the most remarkable alteration: it was soft to such a degree of fluidity that the canal formed by the dura mater appeared to be full of a real liquid, which followed the direction of its gravity up or down according to the position of the body; but this liquid, which thus doubly inflated the covering of the marrow, stopped precisely at those parts of this organ which remained in their natural state. A small opening being made in the dura mater, immediately let a quantity of this fluid run off; when the membrane had been cut through, the spinal marrow was seen covered with its proper membrane; it was of a reddish grey, and extremely soft; it presented a sensible fluctuation, and the opening of its membrane allowed a liquid mixed with small flakes of the medullary matter to run out. The appearance of this part of the marrow was such, that each of the assistants exclaimed that there was a dropsy in the marrow itself; in effect, the natural colour of this part had disappeared, and was replaced by an almost colourless liquid, in which some flakes of the medullary matter were floating. We afterwards made a large opening, and a longitudinal incision, in this part of the marrow, which presented to our view an elongated cavity, filled with a sort of greyish light red fluid, in which a great number of red and extremely thin capillary vessels were dispersed. M. Magendie says, "for the first time, I have seen as distinctly as possible the internal cellular tissue of the marrow; it was swelled with the liquid of which my companion M. Rullier speaks, but its plates and its cellules were no longer evident; they are still more so on the piece which I preserved in spirits of wine." The medullary bands connected with the corresponding roots of the spinal nerves could scarcely be distinguished on the anterior part of this altered portion. On the left side, the interrupted band was no longer marked, for about an inch and a half, except by lenticular pieces of the medullary matter, placed one after another in the line of its direction; this disposition appeared to us to have entirely resulted from the running out of the matter which had existed in this place, in consequence of a small accidental perforation made in the middle part of the opening, or of the treatment the marrow had received. The marrow, detached and taken from its canal, could be examined by its anterior region. Here the alteration, of which we have spoken, was much less sensible; the difference was not superficial, was not to be remarked from the exterior, and the discharge of the matter from the incision that had been made, had diminished the volume, and removed the appearance of fluctuation; the medullary bands corresponding to the reticulation of the origin of the anterior branches of the spinal nerves were apparent, and offered no interruption throughout their whole length, with the exception of the left, which, as we have already said was altered; they were traced throughout the whole extent of the marrow as far as the medullary tissue, whence they have their origin.

An attentive dissection showed us that the disposition and structure of the origin of the marrow and its superior part, as far as the fourth pair of cerebral nerves, presented nothing particular. Behind, the inferior part of the fourth ventricle, and the posterior pyramids—before, the pyramidal and olivarian eminences, displayed their known configuration. On examining carefully the origin of the first spinal nerve, we convinced ourselves that the most inferior reticulations of its origin evidently corresponded to that portion of the marrow which was destroyed.

The structure of all the part, situated above the fourth pair of cerebral nerves, was sound; the medullary substance has its ordinary whiteness and consistency;

but below this point this consistency and whiteness suddenly changed. It appeared that the marrow was converted into a cellular substance filled with a pale rose-coloured serum, as far as the sixth pair of cervical nerves, a part at which there no longer existed but a broad cavity, of which the sides were only formed by the vascular and serous membranes of the marrow and the remains of the medullary matter. This disorganization was remarkable as far as the fourth pair of dorsal nerves, but the alteration penetrated in the form of a cone into the midst of the medullary substance, which appeared of its natural properties.

The eight lower inches of the organ shewed no alteration. Some nerves were dissected and traced, those of the brachial plexus, in particular, as corresponding to the disorganization; they, as well as their ganglions, were found without any alteration. The lungs, apparently soft and crepitant in their anterior part, were not sound; they loosely adhered in their posterior part to the costal pleura. The left lung contained in its superior lobe some thin and dispersed tubercles; the posterior edge was filled with blood. The right lung, more diseased, presented in the same region a similar aspect; it had there the appearance of the hepatization which follows chronic pneumonia, and presented several aggregations of suppurated tubercles, the cysts of some of which were ossified.

In the belly, the stomach, though somewhat dilated, was in a healthy state; so also were the other viscera, with the exception of some parts of the small intestines, the different membranes of which, being very much injected were of a rather dark red and slightly livid. Some blackish spots, externally visible, corresponded to the small lenticular ulcers of the corresponding mucous membrane.

The bladder was small and thick, but sound.

M. MAGENDIE'S *Remarks on* M. RULLIER'S *Case*.

To how many reflections does the preceding fact give rise! A man enjoying, almost to his last hour, great moral activity, powerful generative faculties, a free movement of his inferior members, and sensibility in his upper ones, had probably suffered for a long time the loss of above a third of the nervous matter of his spinal marrow; the communication between the cervical and dorsal part of this marrow was, if such an expression may be allowed, no longer maintained, except by the membranes; for it has been seen that there only remained a thin layer of white substance scarcely two lines in breadth, and very probably altered in its structure. The cavity from which the medullary matter had disappeared was filled with serum. There was, therefore, an almost complete isolation of the superior and inferior parts of the marrow, and that for above six or seven inches in length; yet the will exercised its empire over the inferior members; the imagination stimulated the genital organs, and these transmitted to the sensitive brain the lively emotions of pleasure.

These two parts of the marrow thus persisting in keeping up their communication is worthy of all our attention. Some motives for a curious examination may be deduced from it. The great sympathetic nerve was not, without doubt, the medium of it; for all sections, or even all compressions of the marrow, intercept the determination of the will relatively to the motions, and render the parts which receive their nerves insensible from the point which is below the part compressed. The thin layer of medullary substance, and the proper membranes of the marrow, therefore remain. If it be imagined that it is stratum of nervous matter, it must be thought very extraordinary, that notwithstanding its small breadth and thickness, it performed this function as well as the marrow in its sound state, and that there was not at least some diminution, either in the rapidity, or if I may say so, in the perfection of the transmission.

If, on the contrary, it be found that so narrow a medullary stratum cannot be sufficient to explain the phenomena, it must necessarily be inquired if the vascular

and serous membranes would not be proper for the nervous transmission. Up to the present time, it is true, nothing has afforded cause for suspicion; but, on the other hand, nothing formally opposes it; here is a new and very important subject of inquiry. The conjecture is here the more allowable, as in the case which fell under our observation, the membranes of the marrow were perfectly sound.

With regard to the motion of the heart, the fact of M. Rullier is not less curious; for after the investigations of Le Galois, a considerable diminution of the mass of the spinal marrow ought so to diminish the force of contraction in the heart, that the blood would not be able to arrive continually at the lower extremities; and yet the circulation was perfectly maintained.

The contraction of the upper members, with a continuance of sensibility, deserves also to be remarked; for the posterior portions of the marrow, where the sensibility particularly resides, had disappeared from all the pairs of nerves which supply the brachial plexus. Thus the sensibility of the arms could not have its ordinary source, viz. that which is connected with the posterior roots. Reasoning after my experiment, there remain, therefore, the anterior roots which give the entire movement, but which, as I have observed, are not incapable of sensibility. Now these roots extended as far as the medullary stratum of communication, and, in this point of view, there will be no difficulty in explaining it, if it be supposed, which is not impossible, that during life a thin layer existed to the left, as one existed to the right. But a circumstance of greater interest is that the anterior roots, as I have recently discovered in the piece preserved, had lost their medullary matter, and were reduced to their neurilema, as is the case with the wasted optic nerve. The posterior roots, on the contrary, had retained their nervous matter as far as their junction with the membranes of the marrow. Every where else, except in that part of the marrow which was altered, the anterior and posterior roots alike presented the medullary matter.

This pathological disposition of the anterior roots of the brachial nerves is well connected with the complete immobility of the arms; but it with difficulty allows a belief that they were the agents of the sensibility. Why, on the contrary, should not the posterior roots, which, far from being wasted, were in their ordinary state, and consequently were filled with the medullary substance, be the organs through which the arms of the patient preserved their sensibility, and occasionally even suffered an acute pain?

This again leads us to conjecture that the immediate envelopes of the marrow might be the conductors of the sensibility, or be themselves sensitive parts. It has been seen, in the experiments which I have before mentioned, that a simple contact of the serous membrane of the marrow occasions an acute pain, if the posterior part of the organ be touched. I, together with M. Dupuy, have recently established this interesting fact by operating on a horse.

An anatomical disposition which is extremely visible on the piece I have preserved, is, that the interior cellular tissue of the marrow, in the cellules of which the medullary matter is probably deposited, established a solid connexion between the anterior and posterior part of the marrow; it was on the layers of this tissue that the blood-vessels ramified.

To sum up every thing, we shall repeat that the observations of M. Rullier show that we have still much to learn with regard to the functions of the spinal marrow. This should induce persons engaged in pathological anatomy to lose no opportunity of examining this part, and even of preserving it, if it present any irregular formation——(*Journ. de Physiologie.*)

V. SURGERY.

17. DELPECH'S *Case of Fracture of the Neck of the Humerus.*

A very corpulent man was attacked by apoplexy whilst alone, and as the event shewed fell on his shoulder. It was not until the sixth day that any symptoms of inflammation appeared in consequence, and on the twelth the disease destroyed him.

After death the ecchymosed state of the cellular structure and of the muscles shewed the violence they had suffered. The muscles being separated, the tendon of the biceps appeared of an unusual length; the upper end of the humerus did not correspond to the articular surface of the scapula. On opening the capsule the head of the bone was found wanting, having been separated from the body by a fracture corresponding to the edge of the articular surface, viz. to the true neck of the humerus. No fragments of the head of the bone were visible, and at first it was not very easy to say what had become of it. The capsule was filled with synovia and blood, partly coagulated, partly fluid. The articular surface of the scapula was ecchymosed but not fractured. The posterior and onter part of the capsule was lacerated, and the head of the humerns forced through it, under the anterior extremity of the infra-spinatus muscle. The edge of the head of the bone which lay on the fossa infra-spinata projected into the opening of the capsule, whilst its articular surface was directed backwards and covered by the infra-spinatus muscle. The lower end of the humerus corresponded to the articular surface of the scapula, and had attached to it the tendons of the supra and infra-spinatus muscles, subscapularis and teres major. (*Chirurgie Clinique.*)

18. *On Bronchotomy in Croup.*

One of our Contributors has drawn up the following paper on the advantages of performing the operation of bronchotomy in cases of croup:—

The usual objection to the operation (proposed as it generally is, at too late a period of the disease) is this:—"That we cannot expect to succeed in making an opening *below* the point of obstruction, the inflammation and effusion of lymph having probably extended too far towards the lungs."

This objection rests upon the assumption that the effused lymph absolutely closes the air passages; but we believe that this is very seldom the case, and that the usual symptoms of croup sufficiently prove that the false membrane formed in this disease acts as foreign bodies in the trachea in general do—causing death by exciting spasm of the glottis; and this being the case, a free opening below the glottis, although the cause of irritation may extend into the chest, might be expected to relieve.

We shall adduce some proofs of the positons above maintained, drawn from the best practical writers on the subject.

1st. With regard to the nature and extent of the obstruction in croup.

We believe that the effused lymph very rarely closes the air passages. On this point the opinion of Mr. Chevalier (who seems to have paid considerable attention to the subject) exactly accords with our own—he says, "I doubt whether death is often to be ascribed to such an accumulation of lymph as absolutely precludes the transmission of air."

If we consult the dissections recorded by authors, especially those by Cheyne and Jurine, we find that the following appearances have been observed:—

An effusion of lymph lining the larynx and upper part of the trachea, sometimes

extending as far as its division, and rarely into the more minute bronchial tubes—the consistence of this lining is various, sometimes it has not sufficient tenacity to admit of its being separated by the forceps or finger from the membrane to which it adheres, sometimes it is so firm that it may be drawn out entire from the trachea, and when it has extended into the bronchial tubes it exhibits and long retains an arborescent form.

Besides this effusion of lymph in the inner surface of the lining membrane, there is often considerable swelling around it from the effusion of lymph on its external surface.

From the combination of these changes of structure, a considerable lessening of the diameter of the trachea must result; yet it does not appear that this is ever sufficient entirely to obstruct the passage, or even to reduce it to such a degree of narrowness as seems to have occurred in chronic cases some time previous to death.

We may remark, that the false membrane being sometimes so loose and moveable as to admit of its expectoration, a part of it may be carried upward and downward with every expiration and inspiration, the rest remaining fixed: it may thus act as a valve during expiration, and cause at intervals its entire and sudden obstruction. In general, however, after death, no part of the membrane is found so disposed as to be capable of acting as a valve, the whole of it adhering equally and firmly to the mucous membrane.

The bronchiæ and air cells, frequently also the trachea itself, are found loaded with mucus, and this is often in such quantity, that some authors think it the usual cause of death; and certainly if such an opinion were well-founded, nothing could be expected from the performance of bronchotomy; but we have good reason to believe that this accumulation of mucus is merely a consequence of the original affection, which might be defined—inflammation of the lining membrane of the trachea, of the kind called adhesive, i. e. terminating in the effusion of coagulable lymph. This termination is a distinguishing feature of the disease—the effusion of mucus is not an immediate consequence of the inflammation—makes no part of the disease in question, but is merely a sequela of it, common to this and numerous other disorders of the respiratory system.

We are warranted then in concluding, from the dissections on record, that in general the effusion of lymph, the characteristic and exclusive produce of the inflammation in this disease, does but partially obstruct the air passages, although the accumulation of mucus which ultimately occurs perhaps in every case, may do so more completely.

The *symptoms* of croup are those which arise from a spasmodic affection of the glottis, combined with a certain degree of obstruction in the trachea and bronchiæ; and the characters which distinguish croup from severe catarrh or bronchitis in young children, are owing entirely to the spasm of the glottis.

The alternate remission and aggravation of the dyspnœa can depend on this cause alone, and the peculiar stridulous respiration is attributable as much to this as to the narrowing of the trachea, if not more so.

The occurrence of the chief symptoms of croup in paroxysms is acknowledged by the best observers; but it has received perhaps much less attention than it deserves in explanation of the nature of the disease, and in the direction of its treatment.

So prominent a feature is this intermission in many cases of the disease, that in the most classical work on the subject (that of Jurine) a distinct species is treated of under the name of INTERMITTENT CROUP.

Taking it as an acknowledged truth, obvious to every observer, that the most urgent symptoms of croup are subject to alternate remission and aggravation, and considering that the effusion of lymph, if regarded merely as the means of lessening the diameter of the trachea, neither in any degree accounts for this *peculiarity* in

the symptoms, nor appears an adequate cause of their urgency, we are justified in concluding that the effusion has an additional and different influence.

The best established physiological principles—the impartial history of the disease in question—the history of diseases strikingly analogous, particularly cynanche laryngæa, and cases of foreign bodies in the trachea—the effect of remedies—all concur in the indication that this additional influence of the effused lymph consists in an irritation of the glottis sufficient to produce its spasmodic contraction.*

The symptoms of this affection of the glottis frequently occur, however, so early in the disease, that the mere existence of inflammation previous to the effusion of lymph† must be sufficient to afford this degree of irritation. To the connection between inflammation and spasm, and the frequent examples of it in organs of a certain structure, we have already alluded when speaking of cynanche laryngæa.

According to the view we have taken of the nature of this disease, bronchotomy may give relief in it, although we should be unable to open the trachea below the point to which the false membrane has extended. This opinion may appear at first view absurd, it is perhaps novel, but it is still reasonable, unless the above statements on which it is founded can be pronounced utterly incorrect. The truth however of the proposition has yet to be decided by experience; and we can only now enquire how far the result of cases in which the operation has been tried hitherto, influences the question of its efficacy

The operation has undoubtedly succeeded in many instances, but the success has been differently explained. In general it seems that the operator has figured to himself the trachea nearly, or entirely, closed by coagulable lymph at a certain point, and has attributed his success to his having made an opening *below* that point; but what proof have we that this was really the case? No reason can be adduced why we should attribute success to this cause, and not to the mere fact of an opening having been made below the glottis, considering *that* as the real point of obstruction; it is as probable that in these successful cases the false membrane extended below the artificial opening as that it did not.

Mr. Chevalier, impressed with the conviction that the effusion of lymph was not such as "absolutely to preclude the transmission of air," ascribes the success of the operation in his cases to "its emptying the trachea of mucus;" but there is no proof that it was really owing to this cause, except that mucus was expelled through the artificial opening; may we not still ascribe the success, and with even better reason, to the cause we have mentioned, considering still the contracted glottis as the chief impediment to the transmission of air?

It may be objected to the view we have taken, that according to it the operation ought always to succeed, while there are but too many instances of its failure. We only maintain, however, that, contrary to the current opinion, the operation is calculated to give relief, that it *may* succeed even where we cannot make an opening *below* the limit of the false membrane. And we would argue also that the failure generally ascribed to the impossibility of making the opening in this situation, is obviously and justly ascribable to other causes; chiefly to its being defer-

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* Dr. Albers, of Bremen, seems to admit this opinion—he says, "We cannot deny that the spasm of the glottis, and perhaps also of the bronchiæ, may contribute to suffocation, as these passages are not always completely obstructed by coagulable lymph."—V. Abhandlung über den croup, Von Ludwig Jurine. Mit einen Vorrede und Anmerkungen herausgegeben, Von Dr. J. A. Albers.—*Leipzig.*

† Mr. Lawrence mentions a case in which the patient had well-marked symptoms of cynanche laryngæa, though after death the membrane appeared quite healthy, and the passage not at all narrowed.

red until, in consequence of long continued laborious breathing, and the imperfect influence of the air on the blood, these changes in the general system are induced, which (as Mr. Richter and Lawrence have so strongly insisted,) are causes of death, even when the original obstruction may have been removed.

The accumulation of mucus, though no part of the original disease, yet occurs to such a degree in the latter period of it, that it becomes a principal source of danger, especially as at this period sufficient strength does not remain to admit of its expectoration. To these causes we would attribute the failure of the operation, when properly performed, rather than to the one commonly assigned; and if we are correct, we must conclude that the operation has failed, in general, only because it has been employed too late.

From what has been stated we would draw the following conclusions:—

1st. That the general nature of the disease, affords reason to expect the best effects from bronchotomy.

2. That these effects may yet be expected, when we cannot open the trachea below the limit of the effused lymph.

3. That where success has been obtained, it is to be ascribed merely to the introduction of air below the glottis, the real seat of the obstruction.

4. That the frequent failure of the operation may in general be ascribed to its being performed at so late a period, when the exhaustion of vital power, and the accumulation of mucus, which cannot be expelled, are sufficient causes of death, though the original obstruction should be entirely removed.

The above remarks are submitted to the profession, with the hope that they *may be* verified, and we would suggest as subjects of peculiar interest, the observation of the exact circumstances under which the operation succeeds or fails, and this with a view to determine the causes of failure and success so essential to the right application of the operation, and certainly hitherto not well understood. It will not, we trust, be disputed that we are fully justified in trying the operation at an *early* period as often as opportunity offers.

19. M. Beclard *on Salivary Fistula.*

The difficulty of any salivary fistula is well known, and if it can be so ameliorated, as it appears to have been by M. Beclard's statement, we should have no hesitation in recommending its adoption. The method was to produce an internal fistula, to carry off the superabundant saliva. This was done in the case related by M. Beclard, by placing in the internal part of the thickness of the cheek a wire (*anse*) of lead, whose top fitted the excretory canal at the point where it was interrupted, and whose ends were tied in the mouth. The exterior wound, rendered bloody by incision, was united by the twisted suture. The cure was effected by M. Beclard in two cases without any deformity besides a linear cicatrix.—(*Report of the Acad. Royale.*)

20. M. Lallemand's *Case of Amputation of the Lower Jaw.*

The patient in this case was aged 68, and of robust constitution. He had three years ago rubbed the skin over a pimple on the lower jaw, which ulcerated and spread so formidably with cauliflower edges, and lancinating pains, that the operation of excision was deemed the only remedy. M. Lallemand circumscribed the diseased part by two semi-eliptical incisions commencing on the upper lip, five or six lines from the commissure, and terminating towards the middle of the thyroid cartilage; they were very convex above and almost straight below. The periosteum was found engorged, thickened, and lardaceous, and the bone already affected. The cheek was dissected to the anterior edge of the masseter muscles on each side; and as the periosteum here appeared to be quite sound, he cut round

the bone, and sawed it somewhat obliquely from without to within, and from before backwards, commencing with the left side. He afterwards detached the muscle and soft parts which were attached to the internal surface of the lower jaw and sawed the right in a semicircular manner. He successively tied the labial, the sub-maxillary, and ranine arteries, with some inferior branches, and before dressing the wound waited till all hæmorrhage had ceased, namely, about a quarter of an hour. He then brought the interior corner of the wound together by three needles and the twisted suture. The soft parts covering the jaw, were next brought close to the branches of the jaw, and maintained there by adhesive straps, and after having filled up the space which separated the divided portion with charpie, the whole was maintained in situ by compresses and some turns of a bandage. The patient, however, in a short time experienced so much difficulty in respiration that he tore off the bandage and a copious hæmorrhage ensued; for which the actual cautery and agaric were applied. After various difficulties which occurred were surmounted, the wound healed on the 50th day after the operation, leaving a space of about two inches between the ends of the jaw, through which the saliva flowed, the tongue dropped down, and the patient articulated very indistinctly. Our author, however, contrived for him a silver chin, enclosing a bit of sponge to take up the saliva, and which he could empty by the pressure of his tongue. It also improved his articulation.—(*Archives Générales.*)

21. M. FERRIER'S *Operation for Staphyloraphia.*

A fisher, aged 37, had a stick driven backwards into his mouth in foolishly descending into a ditch, supporting himself on the stick with his teeth. It entered the velum, and was only arrested at the pharynx. M. Ferrier an hour after found that the wound of the velum presented a fragment (*lambeau*) in form of an angle of 70°, whose summit corresponded to the posterior spine of the nostrils; and the two sides were directed towards the free margin of the velum. The right side was nine lines in length, and the left twelve. The fragment fell down upon the base of the tongue. The back part of the mouth was observed through the wound. The tone of the voice was altered. Upon trying to swallow some coffee, part of it escaped through the nostrils. The indication of the treatment was plain. but the choice of means difficult. The interrupted suture was insufficient. M. Ferrier executed the operation thus; he placed the patient opposite to a window, his head supported and fixed on the breast of an assistant behind. His mouth was kept open by a piece of cork, fixed between the teeth of the right side. M. Ferrier then took a pair of polypus forceps, in his right hand, between whose blades was fixed a flat semicircular needle, six lines in diameter and armed with a ligature, whose ends were a third of a metre in length. The direction of the needle, stood at an angle of 90° with the blades of the forceps. The index and middle finger of the left hand in a state of supination, were placed upon the base of the tongue, immediately under and supporting the torn fragment. He then, with the needle, pierced the fragment from behind to before, three lines from its point, in such a manner as to make the needle pass between the two supporting fingers. When he had thus passed the needle he disengaged the forceps, carried them below the supporting fingers, and seized with them the point of the needle, and carried it out of the mouth, leaving the two ends of the ligature traversing the torn fragment, when it was no longer supported by his fingers. He then separated the needle from the ligature, and fixed on it the pipe of a small quill six lines in length, and forming with it a true T. He did no more than pass by the nostrils the ends of a thread opposite to that to which the quill was attached, an operation easily performed by means of Bellocq's sound, passed into the left nostril. The spring of the instrument being pushed, entered the mouth by passing through the back part of the nostrils and the wound; and to this spring the ends of the thread were fixed.

On retracting the sound, it brought with it the threads, raised up the torn fragment, and maintained it in its place. He then separated the threads at the anterior nostril and fixed them by means of a knot and a loop upon a roll of linen placed before the opening. The patient was forbidden to speak, and had only pea soup for four days. Every day the threads were examined to see whether they remained sufficiently tight. On the fifth day, the torn fragment, having formed a sufficient adhesion, the quill was removed with the rest of the apparatus. On the eighth day, the patient was well and returned to his usual food.—(*Revue Medicale.*)

22. M. Dupuytren's *Case of Wry Neck.*

When this deformity is occasioned either by spasmodic contraction of one of the sterno mastoid muscles, or paralysis of the other, it may sometimes be relieved by an operation. In a case of the former kind it would be requisite to divide some of the fibres of the diseased muscle; in the latter a sufficient quantity of the corresponding healthy one would require to be cut, in order to establish a uniformity of action between the two.

The history of the following case may serve as a guide in practising the operation, as well as one proof of its success.

A little girl about ten years of age, whose neck, or rather her head, had been awry for three years, owing to a permanent spasmodic contraction of the sterno mastoid muscle of the right side, was admitted into the Hotel Dieu, Paris, early in January 1822. On the sixteenth of that month the operation was performed by M. Dupuytren as follows.

The patient reclining against an assistant, a puncture was made, with a straight narrow bladed bistoury, through the integuments just on the inner border of the sternal extremity of the contracted muscle. The blade of the bistoury, being flatly opposed to the muscle, was pushed cautiously behind it, the point being directed forwards and outwards till it protruded just on the outer side of the clavicular border. The edge of the bistoury was then turned towards the muscle, and a sufficient quantity of its posterior fibres cut to allow of the head being placed erect: the instrument was then withdrawn.

In this way the integuments escaped being divided, and a future scar was prevented; a very desirable object, the patient being a female.

The cut edges of the muscle were kept asunder by depressing the clavicle, and inclining the head to the left side. The former was effected by binding the right hand firmly to the foot, the knee being bent; thus the clavicular fibres of the deltoid drew the bone downwards; the latter by a roller passed round the head and under the left axilla.

The patient was kept in bed; and at the end of thirteen days the punctures were healed, and she had free motion of the neck, though from long continued habit, she still turned her face to the left side. The bandages were re-applied, and the same bodily position maintained, till the 21st of February, when they were finally taken away, and the patient pronounced cured, the head being but very slightly inclined to the right side, and having free motion in every direction.

In operating on the male, the fibres may be cut on the anterior surface of the muscle, an incision being first made through the integuments. Inclining the head to the opposite side by a roller, and filling the wound with lint, will then be sufficient to keep its cut edges asunder.

VI. PRACTICE OF PHYSIC.

23. DR. JOHN HUME *on Dr. Stewart's Practice in Phthisis.*

My remarks on the tonic treatment of phthisis having obtained more notice than I expected, I am induced to make some additional observations on the Rev. Dr. Stewart's system, and, at the same time, to give a rapid sketch of the practice of other physicians in that truly formidable disease. I would much rather, however, that this had been done by Dr. Stewart himself, or by some one better acquainted with the subject than I am.

Dr. Stewart, undoubtedly, has performed some extraordinary cures, and even in cases where other professional gentlemen had no hope whatever of recovery; and yet we have been told that none of those were cases of genuine phthisis, but merely such as resembled it. But Dr. S. pretends to have cured not the counterfeit, but the genuine disease; for all his views are directed against scrofula, more generally believed to be the *primum mobile* of phthisis. It would, however, be of essential service to inspect the body of every person after death who was thought to have recovered from an attack of genuine phthisis. In the Edinburgh Medical Essays, Dr. A. St. Clair has given the case of a boy, four years old, with all the symptoms of pulmonary consumption, who recovered by means of a treatment in many respects tonic. The boy died of hydrocephalus, a year after his recovery; and his lungs, upon dissection, were found to be studded with tubercles in various stages of their progress. This, it cannot be denied, was a case of genuine phthisis; but it may be said that the cure was only temporary and partial.

It is, however, when the disease is in its infancy that Dr. Stewart professes to have had most success; although, even in the worst cases, he does not hesitate to employ his invigorating regimen and remedies. And, surely, where a patient is extremely emaciated, where he is worn down by night sweats, where he is teazed by an almost unceasing cough, and expectorates pus in great quantity, Dr. Stewart's tonics, vinegar and water friction, and exercise are more likely to prolong life, than the doses of sulphuric acid, opium, and digitalis, so often prescribed in the lowest state of emaciation and debility, by the despisers of his system. In the one case, the patient feels invigorated and cheerful; in the other sick, restless and miserable.

If a person is predisposed to phthisis, or if he is of a scrofulous habit, the tonic regimen may be adopted at an early period, provided there are no symptoms of active inflammation. With this exception it may be employed freely; when there is an irregular, tickling, dry, barking cough, the paroxysms of which are of some duration, and which have lasted for several months, at first in a mild form, but afterwards in a more severe one, which sometimes excites vomiting after meals, and is worse in the evening or night-time, and which is accompanied at times with an expectoration of viscid phlegm, or of a stringy opake mucus, occasionally streaked with blood; when in wet weather, or in a warm room, or after taking a very little more exercise than usual, there is a considerable degree of breathlessness, with a shifting or transitory pain when lying on one side, and a sense of oppression or a constant uneasy feeling in some one part of the chest: when the fauces are rough, the voice shrill and slender, and when, in speaking or coughing, a hoarse obscure sound seems to issue from the chest; when occasionally there is a slight degree of fever, with languor and dislike of exercise, and a disagreeable sense of dry heat in the palms of the hands and in the soles of the feet, and a

quick irregular pulse; and when there is great emaciation, much worse, indeed, than circumstances should warrant, with want of appetite and other disorders of the digestive functions, and irritability of mind. To these symptoms might have been added, a fair smooth skin, pearly teeth, and a dilated pupil, which, properly speaking, however, are attributes of scrofula. If, in cases where these symptoms, or the greater number of them, are present, Dr. S. has been able to restore his patient to health and vigour, are we to deprive him of the honour of having cured Phthisis?

Many of the objections to the use of tonics in Phthisis, I am sensible, are the offspring of theory, with which I wish to have as little to do as possible. My assertion, that we have made little improvement on the theory of Galen may startle some persons; yet I must think that his "acrid matter of catarrh," sounds as well and is as explanatory of the phenomena of phthisis, as the "irritation" of the modern French school. But Galen's theory was that of all the old physicians, as well as of Sydenham; and Morgagni himself saw no absurdity in it. However, I mentioned it merely as a theory, and never meant to set it in opposition to fact. The grand object of the physician, it would appear, is to overcome the scrofulous diathesis, which is thought to consist in a preternatural activity of the lymphatic system; and this, as some think, is best done by restoring their due preponderance to the blood vessels. These, indeed, in phthisical patients, sometimes discharge blood from the lungs, but much oftener, it is said, from debility than otherwise. In such cases, even in the early stages of the complaint, tonics are of the utmost service. The effluvia of diseased lungs often have the power of irritating healthy persons, if long exposed to their influence. In such circumstances I have known a person seized with obscure hectic symptoms. and slight spitting of blood; and by removing him from the exciting cause, and giving him six drachms of bark a day, I have restored him to perfect health.

Debility is assigned by Rush, Beddoes, and others, as the cause of Phthisis, whether induced by scanty or unwholsome food, clothing, or sudden variations of atmospheric temperature. But the rich are subject to this disease, and they are well fed, and have warm clothing. However, the rich often are as careless of their health as other men; and sometimes, with a view of purifying the constitution, they limit their children almost entirely to a vegetable diet; and besides, the stomach soon becomes tired of the very best aliment, when it is furnished with it in too great quantity. Even butchers live much upon animal food, more from necessity than choice. To shew the effect of a debilitating cause, it may be mentioned, that in the Swedish village of Skalltorp, where the inhabitants have no spring-wells, but use stagnant and putrifying water, about one half of the population die of phthisis.

Dr. S. pays a very early attention to the gastric symptoms, which so often are the forerunners of the pulmonary disease, or its marked concomitant; the attempts, therefore, to regulate the bowels by mild laxatives, or by those that are both laxative and invigorating, such as the compound rhubarb pill, or a combination of rhubarb, cinchona and magnesia. In the predisposed, he begins the vinegar and water friction at an early period; he thinks, indeed, that it cannot be used too soon; but in his endeavours to strengthen the constitution he shuns all sudden changes, and habituates the body by almost imperceptible degrees to a cold atmosphere. The vinegar and water, therefore, of which equal parts are commonly employed, must at first be tepid, and be gradually brought to the temperature of the external air. At bed-time, the body, particularly the neck, back, and chest must be rubbed all over with it, and the rubbing continued till the skin is quite dry and glowing. Half an hour is usually spent in this exercise, and then the patient is put to bed. On getting up in the morning the same course is followed; and in some instances, in the day time. It is on account of the intimate connection that subsists betwixt the skin and the lungs, that Dr. S. has tried, by bracing the former, to render the latter unsusceptible of injury. Are persons with rough

scaly skins subject to consumption? Such a skin would seem almost impervious to cold, and to do for the constitution what flannel does in those who have transparent skins.

In ordinary cases, the patient goes to bed at ten, and rises at seven or eight in the morning. After breakfast, exercise begins. In summer and in fine weather, the patient, lightly clothed, rides out on horseback for an hour or two, or till he feels slight symptoms of weariness; or he walks, or exercises himself with the swing. Swinging, in many cases, particularly where the cough is violent, will act more beneficially than muscular exercise, and in such circumstances should be preferred. When the tonic plan has been begun in summer it is continued in winter, with the precaution of defending the body with warm clothing; and in this way hardly any weather should keep the patient within doors. But, even in the house, exercise is necessary; and it must be the business of the physician to find out that kind of it which is most suitable. In some cases he may use exercise before breakfast. Dr. Stewart, even in the last stage of phthisis, has used it to a great extent, and certainly with no bad effect; and yet a long journey, at such a time, cannot be commended, unless it be in the shape of a sea-voyage. When hectic fever is actually begun, the forenoon's exercise should be so managed that the patient may be employed with it, at the commencement of the cold stage.

The patient's diet is a matter of great moment, and it must never be of the tonic kind, if there are any contra-indicating symptoms, such as severe local inflammation. It should be nourishing, but not heating, and may consist of solid animal food, animal soups or jellies, eggs, milk, and vegetables. The breakfast may be of milk, chocolate, or tea, with bread and an egg, if it be agreeable to the patient. Some, perhaps in Scotland, will prefer oatmeal porridge, or pease-porridge with milk. At noon the patient may have a little good soup. The dinner should be of solid animal food and vegetables; those dishes being preferred which are quite plain and as free from fat as possible. A small proportion of good port wine and water, or of ale or porter, may be allowed after it. The patient should take little or no supper. The drink may be water, acidulated with a mineral acid, or with port wine.

Bitters or steel are occasionally administered, either separately or in conjunction. In the most debilitated constitutions Dr. S. has prescribed a mixture which consists of myrrh, sulphate of iron, and cinnamon water, and with temporary benefit. He also uses the cold infusion, or decoction of bark, plain or acidulated. For coughs, opium, or henbane may be given at bed-time, prepared as simply as possible; for Dr. S. disapproves of pectoral remedies which contain many ingredients. Neither does he approve of the tartar emetic ointment, probably from having had no experience of its use; preferring a blister issue to the chest or side.

Such is an outline of Dr. Stewart's practice, and it may not be uninteresting to inquire how far other physicians have agreed with him. Sydenham, as it is well known, has praised exercise on horseback above all other remedies, and during its use he allowed every kind of diet. In some of those who recovered there were marks of scrofula. His words are, "Quibusdam eorum, qui ex hac methodo convaluere, tumor in collo exortus est, non multum a scrofulis abludens." The greater number of the species enumerated by Sauvages are symptomatic; but where the disease is combined with scrofula, the remedies he recommended are, in general, tonic; steel, milk, animal soup, and exercise.

Joseph Rawlin, in 1774, cured hysteric phthisis by means of steel and aperients, when other remedies had failed; and this seems to have been the dyspeptic phthisis of modern physicians. In the tuberculous species he condemns steel and mercury; and in the first stage, recommends stomachic bitters and laxatives. He has known a person recover from the second stage after an illness of three months. He forbids the use of milk, having an idea, like many other physicians, that it is favourable to the production of purulent matter. Valcarenghi allows its use, when

balsamics have cleared the pulmonary ulcers. By means of bark boiled in milk, vegetables, and exercise, the great Haller was enabled to cure ulcers in the lungs; but this plan did not succeed with females in whom there never had been any appearance of menses; yet, in general, it is no difficult matter to cure an ulcer of the lungs if the pulse is natural. Morgagni cured pulmonary consumption by the use of milk, animal jellies, steel, ground-ivy, and St. John's wort. Sir John Pringle prescribes country air, exercise, and milk diet; and in scrofulous habits dissuades us from blood-letting. In a disease which resembled tubercular phthisis, Huxham, found blood-letting hurtful, unless it was used locally and at the commencement of the disorder, and in the dry cough and dyspnœa of tuberculous patients, he recommends a decoction of bark or guiacum, with a milk diet, riding, and a healthy country air. Dr. Simmons allows animal food in moderation; a caution which should in all cases be attended to. From extreme antiphlogistic treatment, Dr. Percival has not only seen the patient's sufferings aggravated, but his death hastened; and in strumous habits he has observed the hectic heat augmented by venesection. Every thing that gives tone to the stomach, he thinks, will probably abate the quickness of the pulse, and check the virulence and frequency of the cough. A person in what appeared to be a galloping consumption, and who had been kept on a very low diet, was restored to health by the gradual employment of a tonic regimen.

It will be observed, that in the cases given by Dr. Drake and Mr. Adair, as cured by digitalis, hemlock, and other medicines, perhaps most of the benefit was obtained from the milk, wine, porter, and animal food which at the same time were administered to the patients. Dr. Ferrier was successful with digitalis, probably from its having been given in conjunction with bark and a nourishing diet; whereas, in the unsuccessful cases of Dr. Beddoes, the same attention seems not to have been paid to diet. Yet Beddoes was a strenuous advocate for the tonic regimen in phthisis. When the disease is threatened, Dr. Rush prescribes the cold bath, exercise, steel, and cinchona; and when it is confirmed, stimulating diet and medicines. In the predisposed, he says that riding, to be effectual, must be constant. Dr. Wilson Philip, who has written so well on dyspeptic phthisis, is of opinion that where there is a tendency to consumption, debilitating doses of any medicine are hurtful; thus favouring indirectly the cause which we have been advocating. Dr. Shearman also, though perhaps erroneous in his theory, has brought practical proof of the benefit to be derived from tonics.

In the regulation of diet much must always depend on the discernment of the practitioner, it being impossible to lay down rules that will apply in every case. Yet, if most physicians have seen the propriety of using animal food in the latter stage of the disease to obviate diarrhœa and debility, why not use it cautiously at an earlier period to prevent them entirely? In an inflammatory diathesis, I acknowledge it to be improper; I think milk equally so. Milk is strictly animal, and surely we are not justified in calling it vegetable, because it may be partly produced from herbs? As well might we call flesh vegetable. In ulcerated lungs, from tubercular phthisis, viper broth has been much celebrated by the Italians, and oysters by many other nations, from their being so purely animal. Perhaps many of the cures attributed to particular remedies were owing to the "alimenta bonæ notæ;" and it is probable that the want of success with the same remedies may, in many instances, have depended as much on the neglect of diet as on the constitution of the patient. I am disposed to think, indeed, that in the case of G. R., his animal diet was fully as beneficial as the tartar emetic ointment, from the latter not having the same marked success in other cases, where the food was of an inferior quality. Yet I firmly believe that in many respects the tartar emetic ointment will be a valuable remedy.—(*See Quart. Jour.* No. 18.)

In the adoption of the tonic treatment, the residence of the patient is a matter of no little moment. It should be remote from marshes, in a dry open situation, where the air is serene and pure, and where the north-east wind never blows

violently. In such a place, the patient may be exposed freely to the external air; but, when the weather is cold and hazy, riding or walking out early in the morning, or late in the evening, will be improper; and at all times in winter, the clothing should be warm and comfortable, but never more than the constitution on trial may actually require. In all cases too great heat, whether in the patient's room or from his clothing, will be hurtful, even although it should not be disagreeable to him. But late in the disease, and when no attempt has been made in summer to habituate him to change of temperature, an artificial warm atmosphere must be employed within doors in winter.

It is well known that in phthisis the same remedies have been extolled and condemned by physicians; and on that account I am induced to offer a few remarks on the principal remedies which have been employed in that disease. With regard to blood-letting, almost all authors agree that even small detractions of blood, if often repeated, may do much harm in delicate constitutions, even although the pulse should have some degree of fullness, and the blood show fibrine. Even the anonymous author, in the Medical Essays, who speaks so highly of blood-letting, dissuades us from it, if there are merely crude tubercles in the lungs; and in all cases, *to prevent its bad effects*, he advises bark, frictions, and gentle exercise to be employed along with it. At the commencement, however, of catarrhal cough, so often the forerunner of consumption, antiphlogistic remedies are indispensable; but in the scrofulous constitution, they must be employed with caution. In such cases local blood letting is safest. Issues, blisters, and rubefacients, seem to resemble each other in their mode of action. Moderation in the use of liquids, and the warm bath, probably occasion an increase of tone. There is much difference of opinion with respect to bark. It is thought by many, particularly foreign physicians, that it binds the chest, renders the breathing more difficult, and increases the tendency to inflammation. These effects are probably imaginary. Even in hectic fever, Heberden says "nullus dubito quin tutus sit." In early cough, attended with debility and slight hectic, it is often of great service from its tonic quality; yet I would hesitate to give it in a hard dry cough, attended with much heat and febrile action. In cases of exquisite hectic, and purulent expectoration, I have given it in very large doses without aggravating the complaint, but certainly without benefit to the patient. Dr. D. Munro commends it during expectoration, but before that, he says it excites heat; while Sir John Pringle assures us that it is at no time heating. Iron also has its favourers and opponents. In debility it is a powerful remedy; but in strong inflammatory action it is improper. The balsams, and among the rest copaiba and asphaltum, or distilled naphtha, were at one time highly extolled in ulceration of the lungs. But innumerable are the remedies of this intractable disease: a German writer even recommends the cool juice of cucumbers to remove fever, and to wash away the absorbed pus from the blood! In the tubercular consumption, mercury, in small doses, has been prescribed: but in pure phthisis, where there are no dyspeptic symptoms, it is always hurtful when given to any extent; hence the fatal mischief occasioned by mercurial doctors, who mistake pulmonary for hepatic disease. Are we to believe that the exemption which butchers, fishwomen, stable boys, grooms, gardeners, ploughmen, &c. are supposed to enjoy from the disease, arises from the *animalized* atmosphere they breathe, or the terrestrial effluvia which they inhale? It probably depends upon other causes, or it is in a great measure imaginary.

Hamilton, Sept. 1, 1823.

24. M. GERARD'S *Three Cases of Chronic Pneumonia.*

1. A young woman, aged twenty, born of a father who died phthisically shortly after her birth, exhibited from her youth all the signs of a scrophulous constitution, and great nervous mobility; had for four or five months before the 5th, February

1822, experienced a harassing cough, most troublesome during the night; her sputa were purulent; her skin of a pale yellow tint; appetite almost natural; the sound given from percussion of the greatest part of the chest very flat. She was put upon barley water and milk for nourishment, and thirty leeches were applied to each side of the chest beneath the clavicles. An hour after their application she had faintings, convulsions, and delirium, which lasted four or five hours. The bleeding from the leech bites continued for eight hours, when having stopped spontaneously, a large warm poultice was applied over them, which renewed the hæmorrhage for some hours longer. The same rigorous diet was continued till the 9th, when some little addition was made to it; and the poultices and ptisan were continued till the 21st; during which time her appetite and strength returned, and she had only one fit of coughing after the application of the leeches. On the 23rd she set out for the country in a state of complete convalescence, and returned on the 2nd of March to Paris to resume her occupation, where she has ever since enjoyed perfect health.

2. A young man, brother of the preceding, aged 23, contracted a severe catarrh in January 1820. For some time after his nights were passable, but the least fatigue caused fits of coughing; his skin was usually moist; he drank warm milk, barley water, a soothing syrup, and had a blister to the left arm without much effect. On the 6th April, his strength and appetite were reduced; his tint a pale yellow, except an occasional vivid flush on the summits of the cheeks; his cough was strong, frequent, and followed by purulent expectoration; his pulse full and feverish; his condition excited painful reflexions in his mind; and, in fine, percussion gave a dead and flat sound in almost the whole of the left side of the chest. On the 7th twenty leeches were applied to the chest and the bleeding promoted by warm poultices, and for drink was he ordered water gruel; in the evening the pulse was accelerated. The cough was only slightly diminished. On the 15th, thirty-six leeches were applied, and the fits of coughing were much relieved, without altogether disappearing. Till the 10th May, the symptoms gradually diminished when he was sent to the country and enjoined a milk diet, when he gradually recovered his strength and appetite, though he had still two or three fits of the cough during the day His nights were excellent. On the 20th June, he was able to perform a small journey; and he now took regular exercise on horseback, which together with ten or twelve drops of the hydro-cyanic acid, daily, for a slight cough now esteemed habitual, brought, in the space of a month, his health into a state "*qui ne pouvait que faire envie.*" He married a short time after and has had no relapse.

3. In January 1820, Madmoiselle G——, aged 19, of a delicate constitution, had been subjected for a long time to cough and a feeling of suffocation, which prevented her from sleeping, and which was often followed by syncope for some hours. She was bled largely from the foot, but as the weather was excessively cold at the time, she was attacked with an intermittent fever, arising doubtless, says the narrator of the case, from the debility of the cutaneous system, which the bleeding had caused. She had a drachm of the powder of kino and an antispasmodic potion daily, and on the 27th her health was re-established.

On the 8th May she complained of severe pains at the epigastrium, a small dry cough; and as the menstrual discharge was irregular, ten leeches were applied to the pudenda, with the effect of restoring this discharge. On the 16th she set out for the country; her cough had disappeared, her appetite returned, in short she thought herself nearly cured; when, on the 25th, the weather having become rainy, she was seized with intense gastric and pulmonary symptoms at the same time, which were very little relieved by leeching. On the 25th ten leeches to the epigastrium were followed by a marked amendment in the gastric symptoms, but it was only towards the 19th July, that the patient's friends would permit of leeching to the necessary extent; when fifteen were applied to the epigastrium, and repeated on the 21st. On the 23d a new application of leeches was made to the

back and to the left side; each application was followed by a slight alleviation; the left side was at this time the most affected, and in almost its whole extent gave a dull flat sound on repercussion. On the 26th and 28th of July, and on the 2d August, the leeches were repeated without much effect; however, being again repeated on the 6th, to the number of fifteen, the symptoms began to yield though the cough still persisted, and the winter approached, the evil of which was much to be feared. On the 30th August, moxa was burned upon the left side of the chest; and as soon as suppuration was established, a marked amendment in all the symptoms, gastric as well as pulmonary, followed. On the 16th October, two new issues were opened by the moxa, and on the 29th the menstruation appeared without any attending bad symptoms. Percussion of the chest now began to give a more natural sound; the appetite revived, though the digestion was yet languid, her sleep was good; in December the menses having failed to appear, a blister was applied, and on the 9th January, the menses appeared naturally. On the 28th, twenty leeches were required, after which she has experienced no relapse.—(BROUSSAIS *Annales.*)

25. M. RICHARD'S *Three Cases of Apoplexy.*

1. M. X———, an officer, aged nearly fifty, strong constitution, considerable obesity, sanguineous, addicted to the immoderate use of spirituous drinks, was attacked, after a day passed in drunkenness, with a partial paralysis of the muscles of the left side of the face, which a bleeding with leeches and a blister, sufficed to dissipate. During many months after this attack he appeared to enjoy an excellent state of health; his spirits were active, his colour fresh and rosy, and his appetite keen. He continued to drink, however, at the rate of one hundred and eighty bottles of ale by the month, besides what he used at his repasts, and independently of a copious use of brandy. In process of time he began to have headaches, when not under the immediate excitation of the alcohol: and on the day of St. Louis, being at mass, he experienced a feeling of feebleness, accompanied by a copious sweat, which obliged him to retire from the church to a neighbouring coffee-house, where with two of his colleagues he drank a glass of wine, but scarcely had the liquor reached the stomach when he was seized with a violent pain at the epigastrium, general uneasiness, and abundant sweat. Another glass of wine was tried, which increased the pain to such a degree that the patient put his hands to the epigastrium and tore the skin with his nails. Very soon he was struck with violent pain in the head; he asked in a broken voice for vinegar to apply to his temples, but before it could be got, he fell down dead.

Being carried to the military hospital the inspection was made on the following day. The vessels of the hairy scalp, face, and neck were injected with blood; the cerebral veins were gorged; the arachnoid was thickened; the cerebral substance generally soft; the choroid plexus thickened and hardened; the optic bed of the right side presented some irregularities and was of an unnaturally greyish tint. In the centre of the cerebellum, in the midst of white substance, was found a kind of greyish tubercle, of which the edges were serrated, thick, and distinctly separated from the white substance; its size equalled a large nut; it contained no cavity, but its centre was softened. The lungs were sound. The stomach was large, and its greater cul-de-sac externally was of a deep red; and the corresponding mucous lining also of a uniform red, verging towards a brown. Towards the curvatures numerous blood vessels were observed, some of which approached almost to a blackish colour. This tint of the stomach was more distinct as the rest of the organ was remarkably white. The duodenum was brown on its internal surface, and its substance softened, or even pulpy. The liver was loaded with fat, and the spleen enlarged.

2. Grare Athéné, soldier of the line, robust, was admitted into the hospital, labouring under the ordinary symptoms of uncomplicated icterus. The treatment was directed, says the narrator of this case, against the icterus, and not against the

gastro duodenal-inflammation. He drank whey with nitre in it; he had emetics and soap pills. During the night of the 18th day of his entrance, he began to utter the most piercing cries till day-break, when he became insensible. The physician believing that these symptoms depended on worms, ordered *lavement*, and the next day blisters to the legs, a few hours after which the patient died. The vessels on the surface of the brain were gorged with blood; upon the superior part of each hemisphere was a space of four lines in diameter, and of an inch in depth, somewhat softened, and of a yellowish tint. In the cerebellum was a morbid alteration, altogether similar to that in the preceding case. The vessels of the lungs were much engorged; the left ventricle was a little thickened; the larger intestines were filled *with indurated fæcal matter;* the stomach enlarged presented at its greater cul-de-sac the traces of a strong inflammation; the mucous lining, in a space equal to the palm of the hand, was of a bright red, mixed with brownish spots; the bladder was distended by urine, and the blood-vessels of its surface injected.

3. M. Sch——, iron-merchant, aged forty-six, robust, affected for months with indigestion and head ach, experienced great inquietude in consequence of seeing himself at the point of being obliged to pay the debts of a friend for whom he had become surety; but unexpectedly the money was sent to him and he passed rapidly to a state of extreme joy. He dined copiously, and made an abundant supper with a friend in the evening, and the next morning, at ten o'clock he was found dead in his bed. The inspection was made on the following day. The body exhaled a horrible odour; the abdomen was enormously distended with gas; a bloody froth issued from the mouth; the face was black by excess of injection of the capillaries; the walls of the chest were livid. The intestines exteriorly presented a great number of brown patches, of which some corresponded to a deep injection of the mucous lining. The stomach exteriorly was brown; the whole of its mucous coat was deeply inflamed, in some spots the colour approaching to black. The heart was enormous, the left ventricle being at least four times its natural size; on the contrary, the right ventricle was small, and its parietes thinned. The aorta was enormously distended, so that the injected aorta of another subject could be easily introduced into it. The lungs, engorged with blood and serum towards their base. The vessels of the dura mater injected; the arachnoid pale, but thickened, and a whitish albuminous liquid was effused between it and the pia mater; the last membrane strongly injected, as also the substance of the brain itself.

Such are a sample of the cases by which M. Broussais attempts, *practically*, to discriminate what he calls his physiological medicine. Whether his theories are true or false, we confess we take no very deep interest in discovering; indeed we suspect that, like many others equally ingenious, "they will have their day," and are probably destined, in their turn, to give way to new and more attractive speculations. What we most admire in his doctrines is, that the practice to which they lead, though still lamentably defective, and characterized especially by a *theoretical* dread of purgatives, is at least an improvement on the reigning treatment of many diseases in France. The French, for example, believe that bleeding is only useful to moderate, not to introduce inflammation; they believe that, when carried beyond a certain pitch, it interrupts the regular course of the disease, and leads to hepatization; for example, in the lungs, and other equally bad consequences, M. Broussais designates them under the name of *expectants*. Whatever their theories may be we shall give two cases from M. Lænnec's book, which we happen to have before us, one of the keenest opponents of Broussais, and otherwise a learned man and skilful physician, for the purpose of contrasting his practice with that of Broussais.

Pierre Bellot, aged 32, of a strong constitution, had occasionally for six months past shewn symptoms of mental alienation, when on the 23rd of December 1817, in consequence of a debauch, he was attacked with violent head-ache, delirium, and agitation, for which he was admitted into the Hospital Necker on the 26th;

at the visit M. Lænnec found him lying on his back, with his neck and body bent forward in consequence of permanent contraction of the muscles of the neck and belly. The biceps muscles were so strongly contracted that they maintained the forearms in a state of flexion, difficult to overcome. The face was red and expressive of profound stupor. The patient seemed deprived of sense and unable to speak. The conjunctives were injected; the right pupil a little more dilated than the left; the pulse hard and a little slow; the heat of the skin strong; he had constipation. He had also risus sardonicus very distinct. *Four leeches* were ordered to the temples. On the 29th, slight amelioration; on the 2nd January, profound stupor, right pupil much dilated, left much contracted; in the evening he had rattle in the throat, spasms of the arms, a frequent feeble pulse, &c., died next morning.

On opening the cranium much blood flowed out; the vessels of the pia mater were gorged; the circumvolutions of the brain much flattened and their substance very firm. The lateral ventricles contained four ounces of serum; the third and fourth were also dilated and filled with serum. The inferior anterior part of the left hemisphere and the totality of the pons varoli were softened, i. e. in a state of *ramollissment*. A pseudo-membrane covered the arachnoid, where it extends between the pons varoli and anterior lobes; the base of the brain also contained serum.

A woman, aged forty, middle stature, lymphatico-sanguineous temperament, was admitted into the Hospital Necker on the 19th December 1817. She had occasional cough and difficult respiration for some time, but she had been confined to her chamber only five days before her admission. She sat rather than lay in her bed; her face was bloated; eyes dull and watering; lips livid; lower extremities infiltrated; respiration short, quick, and panting. The chest, when pressed, gave a rather more flat sound, than natural, and its walls were raised with force at each inspiration The cough was frequent and followed by expectoration of yellow opaque sputa; the pulse small and frequent; the external jugnlars swelled and pulsating, &c. *Four leeches* were ordered to be applied to the epigastrium and pectoral drinks prescribed. She died on the 18th January. No very notable disease of the heart. A pint of serum found in the right cavity of the chest and some adhesion of the lung to the pleura cortalis, and near the summit of the lung a small cavity left by the softening and expectoration of tubercles. The right lung adhered strongly in its whole extent to the pleura costalis, &c., both lungs were gorged with blood. No person can place more value on the pathological labours of M. Laennec than we do; and we believe he has the character of being one of the most acute physicians at forming a diagnosis of the present day. In the treatment of the disease, however, his hand seems to be arrested by some theory, at least, as powerful in his mind, as that which inspires M. Broussais with all the ardour of a reformer. In the practice of both parties we are afraid the treatment is altogether subordinate to the theories which they maintain; M. Broussais excludes purgatives in a great measure from the list of his remedies and he prefers local to general blood-letting, because he believes that a numerous class of diseases have inflammation of the stomach and intestines as a concomitant symptom and because he denies the existence of essential fevers. We have heard many Frenchmen praise our Lord Bacon; we should like to see his mode of investigating nature, applied a little more largely to the treatment of disease, than it at present is by the French physicians.

Of the second case of apoplexy, succeeeding to jaundice, M. Broussais remarks that he believes himself to be the first who has opposed the use of emetics, purgatives, bitters, soaps, &c., in this disease, and has pointed out a new and most successful mode of treatment, even in those cases without fever and with slowness of the pulse, namely *sangsues* to the epigastrium, a new *panacea* in the hands of this revolutionary physician, which no disease is able to resist. Usually, he says, those patients treated by the former means, are troubled ever after with a chronic

astritis, but the leeches being applied " les malades n'ont rien à redouter des suites de cette affection." We detest charlatanism in science and do not mean to spare it. Again with regard to the same case, which is communicated by one of his most skilful and devoted apostles, he remarks, that the physician who treated this soldier prescribed at a venture, without paying attention to the organic alterations, or the effects of his remedies; in so much so, that the young apostle, scarcely yet decorated with the doctor's cap, is put to the blush for him; but such scenes, he adds, are repeated every day in all the countries into which *notre doctrine a penetré.* We dislike heat, and above all personality in scientific matters, and we shall not fail to reprobate them whenever we encounter them.

With regard to the third case, the enlargement of the heart, we are happy to be able to agree with M. Broussais's remarks especially as they are altogether an echo of what we were accustomed to hear from the mouth of Mr. Abernethy. The stomach, says he, is destined to transmit to all the nervous apparatus the stimulations which it receives from drinks and aliments, the heart receives its share of their impressions, and is supplied by branches of the same nerves which are transmitted to the stomach. Can we beleive that a man for a series of years may with impunity execute the actions of his heart by the daily pampering of his stomach without the texture of that organ finally suffering? The contrary is the fact; for many enlargements and aneurisms of the organ are occasioned by a chronic gastritis; and we see every day palpitations and other symptoms disappear when the *gastro-enterite* is cured.

(Broussais, *Annales de la Medecine Physiologique.*)

26. M. Zollickoffer *on Stramonium in Chronic Rheumatism.*

On trying the datura stramonium in chronic rheumatism, M. Zollickoffer thinks he obtained decided advantages. The following are some of the formulæ which he exhibited:—

1. ℞ Seminum Daturæ Sramonii, ʒj.
   Spirit. vini ten. lbss.
   Macer. per septem dies, col. et serva.

2. ℞ Foliorum Daturæ Stramonii, ʒij.
   Spirit. vini ten. lbj.
   Macer. per quinque dies col. et adde,
   Olei Pulegii, gr. xx.
   Olei Cinnamomi, ʒss.
   Tincturi Opii, ʒj.
   Spirit. vini camphor. ʒij.
   Misce et serva.

3. ℞ Foliorum Daturæ Stramonii, ʒij.
   Axung. porci, ʒiiij.
   Misce et coq. leni igni, in vase fictili serva.

The first preparation M. Zollickoffer gave in the dose of from eight to eleven drops morning and evening, till the patient experienced slight giddiness, when he intermitted the medicine for some days. He employed the unguent rubbed on the skin when inconvenience arose from the internal use of the medicine.

VII. MIDWIFERY.

27. MALACARNE'S *Case of Laceration of the Pregnant Uterus.*

The subject of this accident, aged 27, and mother of three children, was in the fourth month of pregnancy. On April 25, 1812, she had suffered much fatigue during very bad weather. On returning home she complained of pain in her left side, which was succeeded on the following morning by nausea, lasting some days, and by febrile symptoms. These continued until August 3, when she was seized by violent agitation of the whole body, tumour of the belly, and insupportable pain in the side. A physician called to her found her in a state of syncope; she recovered and did not complain of much pain, but became convulsed when the abdomen was touched. The face, which had been flushed, became pale; the eyes were sunk in the head; the pulse languid and intermittent; viscous sweats covered the body; syncope occurred alternately with convulsions, and only terminated with life.

On opening the body the omentum was found raised by much coagulated blood diffused among the intestines, and in the midst of it was discovered a fœtus, which, from its size, was judged to be about four months. The blood being removed, and the intestines turned aside, the uterus presented itself somewhat flattened, and with an irregular laceration, from which hung some folds of a flaky, fleshy, irregular substance, still pouring out blood. The laceration was on the convexity of the uterus, nearer to its longitudinal axis than the attachment of the Fallopian tube and ovarium, which could not be discovered. The writer supposes the laceration to have been the consequence of previous disease, and death to have ensued from the profuse hemorrhage thus occasioned.

(*Mem. dell' J. R. Istitut. del Regn. Lombard.*)

28. M. MEIRIEU *on Rupture of the Umbilical Cord.*

M. Chaussier, and others, having doubted the possibility of the rupture of the umbilical cord, by the mere weight of the child, M. et P. Meireu presents us with a case of a Madame P. thirty-five years of age, in good health, and pregnant with her third child, who was struck by the pole of a coach on the left side of the abdomen, in the eighth month of her pregnancy. She, however, was not taken in labour until the conclusion of the ninth month, and was delivered of a female child. A few moments before this event, Madame P. was walking about her room, and was seized with a strong pain; she took firm hold of the bed-post, brought herself nearer to the ground, retained the infant by means of her clothes, and placed it on the floor. The whole was the affair of an instant. One of the assistants took the child, and found the umbilical cord broken. This was before the arrival of Dr. Meirieu, who, on examination, found not the slightest traces of contusion on the child: it had, however, a spina bifida, occupying the lower part of the loins and the upper part of the sacrum. The umbilical cord was separated about four inches from the ring, and the end drawn out to a point.—(*Journal Universel.*)

29. M. MONDAT *on Impregnation by the Aura Seminalis.*

Our author regards the aura seminalis as the active part of the semen, and quotes, in support of his opinion, the following decisive experiments performed at Turin by himself and two other physiologists. The semen of a dog having been

received into the cup of a funnel bent for the purpose, its tubular part, ten inches long, was thrust three or four inches into the vagina of a bitch in heat, to convey to the uterus the aura seminalis. In eighteen out of thirty trials, impregnation was produced; and the same result was obtained upon two mares.

(*Journal Universel.*)

VIII. MEDICAL JURISPRUDENCE.

30. Dr. Gordon Smith *on joining Professional Law with Forensic Medicine.*

The junction of technical law with subjects peculiar to the medical profession, in the voluminous and expensive work of Dr. Paris and Mr. Fonblanque, reviewed in our last Number, has given rise to some discussion about its utility. There can be no question about its tending to enlarge the sphere of knowledge, and complete the relation of facts and principles; but whether it is at all necessary, except as a matter of literary or curious inquiry, for a medical man to know the technicalities of law, we think is satisfactorily answered by Dr. Smith.

In the Courts of Great Britain, he justly says, the physician appears, for the most part, in the simple capacity of a witness. He is generally examined *viva voce* either as to his knowledge of a particular event, or his opinion on a fact that may be submitted to him; and to this exposure every member of the profession is equally liable. He is required to prepare himself by no course of study foreign to that of his proper profession, and to observe no formalities but those of prudence and decorum. Juridical disputation, and legal casuistry, can hardly combine with medical reasoning, or illustrate the laws of our physical economy. It is the *prudentiæ medicinæ*, rather than the *prudentiæ juris*, that we are bound to cultivate, even with a view to forensic application.

Our readers will be gratified to learn that Dr. Smith has almost entirely re-written the new edition of his "Forensic Medicine," which will soon be published, and will furnish a book of reference, at a moderate rate, for every thing useful on the subject.

IX. MATERIA MEDICA.

31. M. Andral, Jun., *on the Medical Properties of Strychnine and Brucine.*

The strychnine used in the cases which follow is as pure as possible, and is made into pills containing either a twelfth or a sixteenth of a grain.

Of the former of those, one was given night and morning to a painter who had paralysis, after several attacks of colic. A sort of painful trembling was produced in the extensor muscles of the hands. The dose was encreased to four grains a day, which created spasmodic contractions of the extensores digitorum: the paralysis seemed to diminish, and after a short time he quitted the hospital, having only a

slight weakness left in his hands. The dose could not be exhibited to this individual without danger beyond two-thirds of a grain per diem.

A single pill, containing only a twelfth of a grain, given to a grinder of colours, with the same disease, produced a slight trismus and the commencement of tetanic rigidity in the muscles of the neck and abdomen. At the end of six days, two pills were given, which occasioned violent contractions of both arms. This dose, continued about fifteen days, completely dissipated the paralysis.

It required a third of a grain to produce any effect on a German, with a paralysis of the extensores of both hands. The dose was increased to above a grain, which created powerful contractions, so that it was lowered to a grain. No benefit occurred to this patient, but the case serves to mark the different susceptibility of patients to the action of this substance.

To a potter the strychnine was given to the extent of a grain without much effect, on passing that quantity there came on lock-jaw and retraction of the head. He would take no more pills, and went out without much benefit.

In another case the paralysis seemed to arise from lesion of the spinal marrow, and was aggravated by the strychnine.

The brucine was administered in pills containing half a grain of the alkali. In a paralytic grinder of colours, one pill produced no effect, but four pills caused two slight agitations, and strong contractions He was cured.

Another took four grains without any sensible effect, but five grains excited pretty strong agitations. The paralysis was much alleviated.

A painter and plumber, who both received the medicine, reaped little amelioration from it. In the former, three grains gave rise to pretty violent trismus; and in the latter, three grains and a half occasioned tetanic rigidity of the limbs.

The conclusions from the above cases are, that strychnine has a similar action on man to the extract of nux vomica, but in a more intense degree. Brucine acts in a much less intense manner, and may therefore supersede the alkali of nux vomica. With regard to their curative qualities, both strychnine and brucine are more or less efficacious according to the species of paralysis. Where this affection is connected with an inflammatory state of the brain or spinal marrow, it most probably will aggravate the symptoms. Where it is the result of apoplectic attacks, they are also often useless, but to the paralysis which occurs without any lesion of the brain or spinal marrow, such as is usual in those who work with preparations of lead, these alkalies are an efficacious remedy.

(MAJENDIE'S *Journ. de Physiologie.*)

32. ROBIQUET *and* VILLERME *on the Cyanate of Potassium as a succedaneum in Medicine to Prussic Acid.*

It is obvious that no medicine can be generally depended upon, or ought to be admitted into general use, which cannot be procured in a state capable of maintaining itself, at least, for a certain time, in a uniformity of strength, and other qualities, yet the Prussic acid, which has been so much obtruded on the notice of the profession by a few admirers, is liable, in the highest degree, to this objection; by no process yet invented can it be obtained in a state in which its extreme volatility, and the strong propensity of its elements to disunion, do not rapidly alter its power to change its nature. Hence, that inequality which has been remarked in the mode of action and in the effects of this substance.

In subjecting the triple salt of the prussiate of potash and iron to a long continued heat, M. Robiquet observed a re-action to take place. The prussiate of iron was re-composed, and a mass left after a strong calcination, consisting of the cyanuret of potassium with the iron and carbon belonging to the decomposed salt. This mass readily dissolves in water, depositing the iron and carbon, and at the same time transforming itself into a hydrocyanate of potash.

The cyanuret of pottassium is a white transparent substance, capable of endur-

ing the action of fire, of preserving itself to an indefinite time without alteration, provided it be kept free from humidity. One grain of this salt, and half a drop of the pure prussic acid, have been dissolved in equal quantities of water, and which have been tasted at different periods, both being exposed in open vessels; that containing the cyanuret of potassium, or rather, as it now becomes, the hydrocyanate of potass, has appeared much less weakened by the exposure than the other solution.

On placing a particle of the cyanurat of potassium on the tongue, a sensation of coolness is immediately felt, which instantaneously changes into one of causticity. A drop of the solution has a similar effect; but the caustic taste is not observed, excepting when the solution is much concentrated. The solution of one grain of the cyanuret of potassium in half an ounce of water, produces a more lively sensation than four drops of the "acide Prussique au quart" obtained by the process of Gay-Lusac, diluted with half an ounce of water. The taste of bitter almonds is also equally powerful, as well as that acrid heat which spreads over the mouth and throat. Besides, there is a remarkable sensation of numbness—a sort of momentary paralysis of the tongue, extending rapidly to the neighbouring parts. This last effect is not, however, universal.

The tenth part of a grain of the cyanuret of potassium killed a linnet in one minute, and a guinea-pig died in three minutes from somewhat less than a grain. With regard to the hydro cyanate, a drop containing only the hundredth part of a grain of the salt in solution, destroyed a linnet in half a minute. The effect on other animals were in proportion.

It is not yet ascertained what influence the small portion of alkali in the salt may have in modifying the action of the acid; but this potash can be easily got rid of by adding a small quantity of vegetable acid to the solution. This new salt has not yet been exhibited in disease.—(Magendie's *Journ. de Physiologie.)*

X.—CHEMISTRY.

33. M. Lassaigne *on Pyro-citric Acid.*

This enterprising inquirer has been rewarded by the discovery of a new acid It is produced by distillation of citric acid; it is white, inodorus, and of a strongly acid taste, and generally occurs in a white mass, composed of fine small needles. It melts on a hot body, and is converted into very pungent white vapours, leaving traces of carbon. It is very soluble in water and in alchol. At 50° of Fahrenheit, water dissolves *one third* of the weight of it. It is composed of carbon, 47.5; oxygen, 43.5; and hydrogen, .9. With the oxydes it forms salts, which differ in their properties from the citrates; these M. Lassaigne has examined the pyro-citrates of potash, lime, barytes, and lead.—(*Journal de Pharmacie.)*

34. M. Pessina *on preparation of Hydro-cyanic Acid.*

M. Pessina, of Milan, prepares hydrocyanic acid in the following manner, which is said to be much more economical than any other process known. Eighteen parts of triple prussiate of potash and iron are powdered very fine, and carefully introduced into the bulb of a small tubulated glass retort, a very small tubulated balloon is then attached to the retort; it is furnished with a conducting tube which dips into the first flask, containing a little distilled water. The rest of the apparatus is contrived so as to prevent absorption. A cold mixture of nine parts of oil of vitriol, and twelve parts of water is then poured into the retort; the retort

is closed and the whole left for twelve hours, the balloon being surrounded with ice and the neck of the retort constantly cooled with wet cloths. The materials are then to be heated a little, and continued so until the striæ, which are observed in the neck of the retort become more rare, and until a blue substance rises, which appears as if it would pass into the receiver. The heat is then to be discontinued, the apparatus allowed to cool, and the contents of the receiver preserved in a proper vessel. The hydrocyanic acid thus obtained is perfectly pure, and of a specific gravity of 0.898 or 0.9. Its quantity, in relation to the quantity of substances used, is not stated.—(*Giornale di Fisica.*)

XI. BOTANY.

35. M. DOBEREINER *on Vegetation.*

The following experiments have been made by Professor Dobereiner, of Jena. Two glass vessels were procured, each of the capacity of 320 cubic inches, two portions of barley were sown in portions of the same earth, and moistened in the same degree, and then placed one in each vessel. The air was now exhausted in one, till reduced to the pressure of 14 inches of mercury, and condensed in the other, until the pressure equalled 56 inches. Germination took place in both nearly at the same time, and the leaflets appeared of the same green tint; but, at the end of fifteen days, the following differences existed. The shoots in the rarefied air were six inches in length, and from nine to ten inches in the condensed air. The first were expanded and soft; the last rolled round the stem and solid. The first were wet on their surface, and especially towards the extremities; the last was nearly dry. "I am disposed," says M. Dobereiner "to believe, that the diminution in the size of plants, as they rise into higher regions on mountains, depends more on the diminution of pressure than of heat. The phenomena of drops of water on the leaves in the rarified air, calls to my mind the relation of a young Englishman, who, whilst passing through Spanish America as a prisoner, remarked, that on the highest mountains of the country, the trees continually transpired a quantity of water, even in the dryest weather; the water falling sometimes like rain."—(*Bib. Univ.*)

XII. ZOOLOGY.

36. PROFESSOR SILLIMAN'S *Account of a Toad.*

The workmen engaged in blasting a rock from the bed of the Erie canal, at Lockport, in Niagara county, lately discovered, in a small cavity in the rock, a toad in the torpid state, which, on exposure to the air, instantly revived, but died a few minutes afterwards. The cavity was only large enough to contain the body without allowing room for motion. No communication existed with the atmosphere, the nearest approach to the surface was six inches through solid stone. It is not mentioned whether the rock was sandstone or limestone, but from the prevalence of limestone on the surface of the contiguous country, it may be presumed to be the

latter. The country is wholly of secondary formation. Of the causes which enable animals of this class, which have been suddenly enveloped in strata of earth or otherwise shut out from the air, without injury to the animal organ, to resume, for a limited period, the functions of life on being restored to the atmosphere, no explanation need here be given, as the occurrence is a very common one, and is, perhaps, always more or less the result of galvanic action.—*Silliman's Journal.*

XIII. MISCELLANEOUS.

37. *Death of* M. Ducamp.

This promising young surgeon, already so favourably known to our readers for his admirable work on Strictures and Retention of Urine, was cut off by an affection of the chest, on the first of April last, at the early age of thirty-one. He was a native of Bourdeaux, and having completed his studies, was appointed an army surgeon in 1811. He was successively employed in the hospital of Strasburgh, Val de Grace, the army of Spain, and after the peace in the hospital of the Garde royale. He obtained his degree of M.A. from the faculty of Paris in 1815. He translated Bree on Respiration, from the English, and wrote several excellent analyses for the *Revue Medicale.* In 1822, he published a pamphlet on the Refutation of the Doctrine of Fevers. His best work, however, is that already mentioned, on Strictures, of which we have given a very full extract in our seventeenth number.—(*Revue Medicale.*)

38. *Conviction under the Apothecaries Act.*

In an action by the Apothecaries' Company at the Lancaster Assizes against a person of the name of Stott, to recover a penalty of twenty pounds, for his having practised without being qualified as the Act directs,—it was proved that defendant was about thirty-three years of age; that he had been employed from childhood in various woollen manufactories; that from 1813 to 1817, he had been employed for 14 years every day as a slabber; and that subsequent to that period, he had attended patients and practised as an apothecary. Stott rested his defence on the plaintiff's not being able to allege against him any instance of unskilful practice; that he had, while a slabber, assiduously studied medical books and visited and prescribed for patients, and had also kept a drug-shop, for profit. Mr. Justice Bailey, in summing up, said the only point was for the jury to say, whether or not the defendant had on the 1st of August, 1815, *bonâ fide* practised as an apothecary. The jury returned a verdict for the plaintiffs, for one penalty of £20.—(*Medical Repository.*)

XIV. CRITICAL CHARACTERISTICS.

39. *Anatomical and Physiological Commentaries.* By Herbert Mayo, Surgeon and Lecturer on Anatomy. No. II. 8vo. Underwood, London, 1823.

We expressed in a former Number our opinion of the first part of this work. It clearly shows the man of accurate science and persevering research; but we fear it is likely to be considered by the profession as much more curious than useful; and the mode of publication which Mr. Mayo has chosen, unfortunately for himself, is likely to limit its circulation to a much more narrow sphere than its merits entitle it. Nobody likes to purchase odd volumes and unfinished parts of books. If Mr. Mayo would but complete a volume, we have no doubt that the novelty of some of his subjects would attract attention.

40. *A Treatise on Practical Cupping, comprising an Historical Relation of the Operation through the Ancient and Modern Times; with copious and minute descriptions of the several methods of performing it; intended for the instruction of the Medical Student, and Practitioners in general.* By SAMUEL BAYFIELD. pp. 176. 8vo With plates. Cox, London. 1823.

This is intended to be what is termed a very complete treatise, that is, containing all that can possibly be said about cupping, for the purpose of making up a book of a certain size and price; while all that is really useful for the "medical student, and practitioners in general," for whom it is ostensibly written, might have been comprised in from 20 to 50 pages. Those, however, who agree with Mr. Bayfield and Mr. Mapleson, that the medical profession in general are deplorably ignorant of the value of *their* art, which, they say, is nearly confined to London, will find, either in this work, or in that of Mr. Mapleson, most ample instructions for performing the operation on any part of the body. Like all operations, it requires much practice to be able to perform it neatly and dexterously. To country students, we would recommend the propriety of taking practical instructions, while in London, from some professed cupper.

41. *Meteorological Essays and Observations.* By J. FREDERICK DANIELL, F.R.S. pp. 478. 8vo. With engravings. Underwood, London. 1823.

Meteorology, we are convinced, has been too much neglected by medical men and the gross ignorance displayed, of even its elementary principles, in most medical works, has led, we have no doubt, to the very absurd and contradictory opinions about miasmata and contagion. One cause of this *inconsequence* (if we may borrow a Gallicism) to the study, has hitherto been the want of a scientific treatise on meteorology. The work before us, however, completely supplies the former deficiency, and so far as the science has hitherto been advanced, leaves us little to desire. Mr. Daniell is well known as an accurate and enterprising experimenter, and a zealous contributor to the Quarterly Journal of Science. He ranks high as a chemist; and this work, as well as his valuable Hygrometer, will rank him equally high as a meteorologist. We cannot indeed recommend the work in too strong terms to all who wish to advance the science of medicine by observing the variations of weather, temperature, and climate, and to untrammel themselves from the absurd fancies usually canopied under the sounding words, miasmata, fomites, and auræ, which, for the most part, serve only to make ignorance the more glaring. In addition to Mr. Daniell's work, we recommend Luke Howard's "Climate of London" to the student of meteorology. There is also a work on atmospheric phenomena, by Dr. Forster, from which some things may be gleaned; but it has more of the parade than the reality of science, the author being perpetually going out of his way for etymologies, learned extracts, &c., which lead to nothing.

42. *A Practical Treatise on the Symptoms, Causes, Discrimination, and Treatment of some of the most important Complaints that affect the Secretion and Excretion of Urine, &c. &c. &c.* By JOHN HOWSHIP, M.R.C., &c. &c., pp. 448. 8vo. With 4 plates. London, 1823.

This appears, from the cursory manner in which we have perused it, to be in part an unacknowledged republication of a former work. It is a judicious and respectable book; but as the author professedly confines himself to his own experience in the diseases of the urinary organs, it is very far from being an account of the present state of knowledge on the subject. Those diseases have so lately occupied a prominent part in this Journal, that if we do recur to Mr. Howship's book, it will only be for some of the less interesting subjects which have hitherto escaped our attention.

END OF THE FIFTH VOLUME

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